10-Cal, Mpa, Mpa-4, 49,140-Var
10-0V300K
PID: 1000020458
Program Code 20.10. 201.378 (SHOPP)
August 2011

PROJECT STUDY REPORT

To
Request for Programming in the 2010 SHOPP

And

Request approval to proceed with the formal studies for a SHOPP project

On Route 4,49 &140

At Various Locations

APPROVAL RECOMMENDED: _____

Arvinder Bajwa,
Project Manager

APPROVED: _____ 9-1-11

Carrie L. Bowen
District 10 Director

DATE

10-Cal, Mpa, Mpa-4, 49,140-Var
10-0V300K
PID: 1000020458
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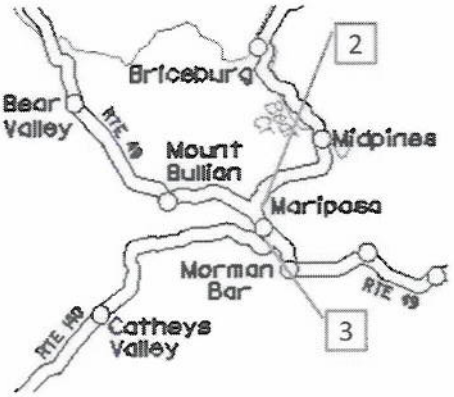
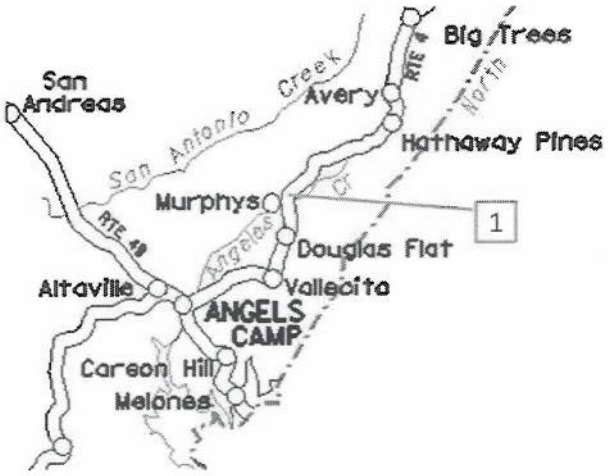


No.	County	Route	Post Mile
1	Calaveras	4	29.62
2	Mariposa	49	18.5/18.7
3	Mariposa	140	21.8



On Route 4, 49 & 140

At Various Locations

10-Cal, Mpa, Mpa-4, 49,140-Var
10-0V300K
PID: 1000020458
Program Code 20.10. 201.378 (SHOPP)
August 2011

This Project Study Report has been prepared under the direction of the following Registered Engineer. The registered civil engineer attests to the technical information contained herein and the engineering data upon which recommendations, conclusions, and decisions are based.

Gurwinder Sekhon

Gurwinder Sekhon
REGISTERED CIVIL ENGINEER

08/04/2011
DATE

Table of Contents

1. INTRODUCTION

This project proposes to upgrade pedestrian accessibility facilities at various locations on SR 4 in Calaveras County, and on SR 49 and SR 140 in Mariposa County. The project improvements include: installation of new sidewalks with curb and gutter, pedestrian signals with push buttons, crosswalks, detectable warning surfaces, upgrade and install new curb ramps, and pedestrian barricades. The project work scope also includes construction of a retaining wall to protect/stabilize the slope exposed during sidewalk construction along SR49 at PM18.7, and installing drainage systems.

The escalated project capital cost for fiscal year 13/14 is $1,794,000 for construction and $37,885 for right of way.

This project is proposed for programming in the 2010 SHOPP Amendment with funding from the 201.378 (Pedestrian Infrastructure) Program in the 2013/2014 FY.

See the Cost estimate (attachment D) for specific work items included in this project.

Project Limits (Dist., Co., Rte., PM)	10-Cal,Mpa,Mpa-4,49,140-29.62,18.5/18.7, 21.8
Number of Alternatives:	2
Alternative Recommended for Programming:	Alternative No. 1 (build alternative is the preferred alternative)
Programmed or Proposed Capital Construction Costs	$1,794,000
Programmed or Proposal Capital Right of Way Costs:	$37,885
Funding Source:	SHOPP 20.10.210.378
Type of Facility (conventional, expressway, freeway):	Conventional Highway SR 4, SR 49 and SR 140
Number of Structures:	1 (Retaining Wall)
Anticipated Environmental Determination/Document	Categorical Exemption/Categorical Exclusion
Legal Description	In Calaveras and Mariposa Counties at various locations.
Project Category	5

2. RECOMMENDATION/PROPOSAL

It is recommended that this Project Study Report be approved using the Preferred Alternative for inclusion in the 2010 SHOPP Program, and that the project proceed to the Project Approval and Environmental Document phase.

3. BACKGROUND

The proposed project is the result of investigations performed by District 10 Traffic Safety Branch upon the request of concerned citizens in Calaveras and Mariposa Counties.

In Calaveras County, a concerned citizen requested an investigation at the intersection of SR 4 and Big Trees Rd/Tom Bell Rd in the City of Murphys for ADA compliance. Upon investigation, District10 Traffic Safety Branch found that pedestrians from the residential area north of Angels Creek use the Angels Creek wooden bridge to access the businesses located at the Northwest and South side of the SR 4 and Big Trees Rd/Tom Bell Rd intersection. No sidewalk or ADA ramps exist on the Northeast side of the intersection. The existing ADA ramp at the Northwest corner of the intersection is nonstandard.

In Mariposa County, a wheel-chaired pedestrian has requested improved accessibility along SR 49 and SR 140. The concerned pedestrian currently uses the 4 ft shoulder along the north of SR 49. The existing shoulder cross slope is steeper than allowed in current ADA standards.

4. PURPOSE AND NEED STATEMENT

Need:

The need is to upgrade the pedestrian facilities to current ADA accessibility standards.

Purpose:

The purpose of this project is to provide ADA-compliant access at the intersection of SR 4 and Big Trees Rd/Tom Bell Rd in Calaveras County and along SR 49 and SR 140 at various locations in Mariposa County.

5. DEFICIENCIES

At the SR 4/Big Trees/Tom Bell Rd intersection, sidewalk, curb and gutter exist with a nonstandard curb ramp that hinders certain disabled pedestrians from entering or exiting the state highway. At the northeast side of the intersection existing curb hinders disabled pedestrians access to the state highway.

In Mariposa County, on SR 49 and SR 140, pedestrian accessibility facilities are not in compliance with current ADA standards. Along eastbound SR 49, a portion of sidewalk exists that is not connected to the SR 49/SR 140 intersection. On the Northwest side of the SR 49/SR 140 intersection, curb and gutter exists which hinders certain disabled pedestrians from entering or exiting the state highway. Along SR 49 between PM 18.5 to 18.7 rocks falling from an existing slope to the shoulder hinder pedestrian access. The existing shoulder has a cross slope steeper than the current ADA standards allow. On SR 140 at Coakley Circle a sidewalk with curb and gutter exists which hinders certain disabled pedestrian access to the state highway.

6. CORRIDOR AND SYSTEM COORDINATION

SR 4

SR 4 is an east/west route beginning at I-80 near Hercules in Contra Costa County and ending at SR-89 south of Markleeville in Alpine County. SR4 in District 10 begins at the Contra Costa/San Joaquin county line near Brentwood, traverses the San Joaquin Delta and the Central Valley areas and extends north easterly across the Sierra Nevada Mountains. In District 10, the route to the east serves as a link between the city of Stockton and the Central Valley with the many foothill towns/Mother Lode communities such as Farmington, Copperopolis, Altaville, Angels Camp, Vallecito, Douglas Flat, Murphys, Hathaway Pines, Avery, Arnold, Dorrington, Camp Connell, Bear Valley, and a few others. To the west it links these same cities/towns/communities to the Bay Area. SR4 also links up with SR 49 in Angels Camp in Calaveras County and SR 89 in Alpine County, which extends into the State of Nevada. It also serves as an important access route as a main street highway for lumber and ranching industries and as the lifeline route for the goods and services needed to sustain the many communities along the corridor. Beginning at Hathaway Pines in Calaveras County, SR 4 traverses the recreational areas of the Stanislaus and El Dorado National Forests. SR 4 is closed in winter at Lake Alpine (Alpine County-PM 3.2). Ebbetts Pass is highest point of elevation on SR 4, beyond Lake Alpine, at an elevation of 8730 ft at PM 18.56 in Alpine County.

SR 4 is functionally classified as a Minor Arterial west of I-5 and east of SR 99. SR 4 is a Principal Arterial where it traverses through the City of Stockton boundaries.

Camp in Calaveras County to the end of the route. SR 4 is on the Freeway and Expressway (F&E) System in San Joaquin County and easterly to PM 7.3 (Jct. un-constructed SR-65) in Stanislaus County. All of SR 4 in District 10 is on the Interregional Road System (IRRS). SR 4 is also bicycle accessible.

The Level of Service (LOS) for rural and IRRS routes is "C", and "D" for urban/urbanized IRRS routes or non-IRRS routes. From the San Joaquin County Line to the rural boundary near Stockton and from SR 99 to the end of the route in District 10 in Alpine County, the concept LOS is "C". The concept LOS for the remaining portions of SR 4 is "D". The concept facility for SR 4 is a 4-lane conventional highway/expressway with passing/turn lanes (as needed) from the San Joaquin County Line to I-5, an 8-lane freeway from I-5 to SR 99 (Crosstown Freeway), a 4-lane conventional highway/expressway with passing/turn lanes (as needed) from SR 99 to Angels Camp. Beyond Angels Camp the concept facility is a 2-lane conventional highway/expressway with passing lanes and/or left-turn lanes as needed.

SR49

The Golden Chain Highway, State Route 49 (SR 49) is a north/south 295 mile route originating at SR 41 in Oakhurst in Madera County and ending at SR 70 near Vinton in Plumas County. In District 10, SR 49 traverses Mariposa, Tuolumne, Calaveras, and Amador Counties. SR 49 links the communities in the Sierra Nevada foothills known as the "Mother Lode" in California's Gold Country. It is the "Main Street" for many Sierra Mountain towns and communities. It leaves District 10 at the Amador/El Dorado county line north of the city of Plymouth. In addition to being used by Sierra Nevada commute traffic, SR 49 is also a highly desirable recreation and tourism route with considerable weekend traffic.

SR 49 is functionally classified as a minor arterial for its entire length in District 10. The entire portion of SR 49 in District 10 is in the Interregional Road System (IRRS) and is eligible for the scenic highway system. The highway is not considered a High Emphasis or Focus Route in the IRRS. Some segments of SR 49 are Terminal Access Routes to the National Network for STAA Trucks. There are also segments that are on the California Legal Truck Network, and segments that are posted as advisory for vehicles with a kingpin-to-rear-axle length of over 30 feet. It is not part of the Strategic Highway Network (STRAHNET). SR 49 is also accessible to Bicycles.

The SR 49 Transportation Concept Report (TCR) identifies the following Concept Level of Service (LOS), the Concept Facility for the 20-year planning horizon, and the Ultimate Transportation Corridor (UTC) which determines the facility needed

beyond the 20 year planning horizon to assist in preservation of adequate right of way to accommodate future widening:

- Concept LOS: 'C'
- Concept Facility: 2-lane, conventional highway with left turn lanes, passing lanes, and turnouts, as needed
- UTC: 4 lane conventional highway

Within the project limits, the following ITS elements exist on SR 49:

Post Mile	Location	Equipment/Description
18.51	West limits of Mariposa	Traffic Monitoring Station Northbound/Southbound SR-49 north of Junction SR-140
19.57	Mariposa	Northbound Chain

Programmed Projects

There are no Active Programmed Projects in the project area at this time. The 2008 Draft Mariposa County Regional Transportation Plan (RTP) identifies the following Short-Range and Long-Range highway projects in the vicinity of the proposed project:

State Route	*PM*	Project Type	Description	Project Source
Short Range				
SR 49	18.51	PeMS	NB SR 49 north of Mariposa, Jct. SR 140	SHOPP
SR 49	18.51	PeMS	SB SR-49 south of Mariposa, Jct. SR 140	SHOPP
Long Range				
SR 49	18.50	Intersection Improvements	SR 49/140 South Intersection	RTP Tier ll
SR 49	18.51	Intersection Improvements	SR 49/140 North Intersection	RTP Tier ll
SR 49	19.61	Widen	Mariposa Creek to Landfill	RTP Tier ll

SR140

State Route 140 (SR 140) is an east/west corridor that begins at Interstate 5 (I-5), west of the city of Gustine in Merced County, and terminates at the Yosemite National Park boundary near El Portal in Mariposa County. The corridor is 101.6 miles long and lies entirely within District 10. It traverses the flat agricultural land of the Valley through Merced County and continues southeast through the foothills of Mariposa County. SR 140 is a year-round highway serving the cities of Gustine, Merced, and the communities of Planada, Cathey's Valley, Mariposa, Midpines, Briceburg, and El Portal. Along this corridor are recreational areas such as San Luis National Wildlife Refuge, Kesterson National Wildlife Refuge, the Sierra National Forest, and Yosemite National Park. This corridor serves primarily recreational traffic to Yosemite National Park.

Except for a short four-lane section through the city of Merced, SR 140 is a two-lane conventional highway for its entire length. A route break of 1.9 miles occurs in the City of Merced where it is concurrent with SR 99. It also runs concurrent with SR 49 through a portion of Mariposa County, from the South Junction of SR 49 through the North Junction of SR 49. SR 140 passes through flat terrain in Merced County, changes into rolling terrain in Mariposa County and then changes into mountainous terrain as it approaches the Yosemite Valley.

SR 140 was added to the Freeway and Expressway System in 1959. It is classified as an officially designated State Scenic Highway from the South Junction of SR 49 to the boundary of Yosemite National Park, with the exception of PM 21.22 to PM 23.21 and PM 33.84 to PM 51.56 in Mariposa County where it is eligible for Scenic Highway status. It is not included in the Subsystem of Highways for the Movement of Extralegal Permit Loads (SHELL) Route system, but it is identified as a Surface Transportation Assistance Act (STAA) Terminal Access Route from Gustine to Midpines. From the east urban limits of the City of Merced to Yosemite, it is included in the 1989 Interregional Road System (IRRS) and was recommended to the Federal Highway Administration (FHWA) as a Highway of National Significance.

SR 140 is functionally classified as a Minor Arterial except for the segment that passes through the City of Merced that is classified as a Principal Arterial. Except for a short four-lane section within the city of Merced, SR 140 is a 2-lane conventional highway.

However, District10 has recommended to the FHWA that the entire route be reclassified to a Principal Arterial highway.

The SR 140 Transportation Concept Report (TCR) identifies the following Concept Level of Service (LOS), the Concept Facility for the 20-year planning horizon, and the Ultimate Transportation Corridor (UTC) which determines the facility needed beyond the 20 year planning horizon to assist in preservation of adequate right of way to accommodate future widening:

- Concept LOS:'C'
- Concept Facility: 2-lane, conventional highway with left turn lanes, passing lanes, and turnouts, as needed
- UTC: 4-5 lane conventional highway or bypass

The following ITS elements exist on SR 140 within project limits:

Post Mile	Location	Equipment/Description
21.08	West limits of Mariposa	Westbound Chain Sign 2-Way
22.01	Mariposa	Eastbound Changeable Message Sign #98, YATI sign, Type 520
22.01	Mariposa	Highway Advisory Radio Station(KNEC966 530AM)
22.001	Mariposa, JCT. SR-49 north	Eastbound & Westbound Traffic Monitoring Stations #298 & #187

Programmed Projects

The following projects are currently programmed on SR140:

EA#/ RTP MPO ID	Post Mile	Location	Equipment/Description	Project Source
EA# 0Q440	22.10	On SR-140 at the North Junction of Routes 140/49 and ½ miles South of Colorado Rd.	Install Changeable Message Sign (CMS) Model 510 and Maintenance Pullout	Minor SHOPP

Planned Projects

The 2008 Draft Mariposa County Regional Transportation Plan (RTP) identifies the following Short-Range and Long-Range highway projects in the vicinity of the proposed project:

State Route	PM	Project Type	Description	Project Source
Short Range				
SR 140	Not assigned	Pedestrian Facilities	Widen/Walkway Mariposa to Spring Hill School	RTP Tier I
Long Range				
SR 140	22.30	Improvement	Left Turn Lane at Smith Rd. non signalized	RTP Tier II
SR 140	22.0-25.1	Improvement	Passing Lane Town of Mariposa to Midpines	RTP Tier II
SR 49/140	18.499/21.224	Improvement	Intersection Improvement 49/140 South Intersection	RTP Tier II
SR 49/140	18.510/22.08	Improvement	Intersection Improvement 49/140 North Intersection	RTP Tier II

7. ALTERNATIVES

There are two alternatives for this project which are the build alternative and the no-build alternative. The build alternative is recommended for programming.

Alternative 1:

At location 1, in the City of Murphys on SR 4, the project proposal is to construct new ADA curb ramps at the southwest and northeast corners of SR 4 and Tom Bell Rd/Big Trees Rd intersection. The existing ADA ramp at the northwest corner of the intersection will be upgraded. Pedestrian signals with push buttons will be installed at the northwest and northeast corners of the intersection. Relocation of an electrical signal pole at the northeast corner, and detector loops are anticipated. Additional right of way is required at the southwest corner of the SR 4 and Tom Bell Rd/ Big Trees Rd intersection. An encroachment permit is also required at the southwest corner of the intersection to connect new construction to the existing sidewalk along Tom Bell Rd. The existing asphalt concrete pathway will be removed, and sidewalk will be installed to provide access to the northeast corner of the intersection from Angels Creek.

At location 2, in the Town of Mariposa in Mariposa County, on SR 49, the project proposal is to construct a sidewalk with curb and gutter. The construction of the new sidewalk along SR49 (at Location 2) at PM 18.7 will require cutting back the existing embankment. A Type 1retaining wall is proposed to protect/stabilize the slope exposed during sidewalk construction. New ADA curb ramp, sidewalk, and curb and gutter will be constructed at the SR 49/SR 140 intersection. The work scope also involves replacing existing curb and gutter, and shoulder widening at the northwest corner of the intersection. Relocation of electrical elements at the southwest corner of SR 49/SR 140 intersection is anticipated. As a part of the sidewalk construction, the existing ditches will be filled, and reinforced concrete pipe along with a junction box will be installed to carry the storm water flow volume. An encroachment permit or drainage easement from local agency may be required to construct this drainage system. At the SR49/SR140 intersection, relocation of an existing sewer manhole and Caltrans ITS elements is anticipated.

At location 3, in the Town of Mariposa on SR 140 at PM 21.8, the project proposal is to construct approximately 80 ft new sidewalk, install two new ADA curb ramps, and replace 50 ft of existing sidewalk along Coakley Circle. An encroachment permit is required to replace approximately 50 ft of sidewalk along Coakley Circle.

An Advisory Design Exception to document those locations where less than two curb ramps are proposed has been approved on 08/02/2011.

The July 2011 construction cost estimate is $1,691,000 (see attachment D). The right of way cost estimate is $34,363.

Alternative 2:

This is the "No Build" alternative. This alternative will leave the existing pedestrian facilities in place and out of compliance with current ADA access standards per Caltrans DIB 82-03, and various other Federal laws and State codes on pedestrian accessibility.

8. OTHER ISSUES REQUIRING DISCUSSION

Right of Way

The Right of Data sheet was completed on 08/08/2011 (see attachment E). Additional Right of Way acquisition, temporary construction easement and utility relocation is anticipated.

Transportation Management Plan

Preliminary traffic impacts and mitigation for this project have been outlined in the Transportation Management Plan (TMP) Data Sheet (see Attachment F). Costs associated with the traffic impact mitigation measures listed in the data sheet have been included in the cost estimate.

A TMP has been prepared indicating how construction can be accomplished using conventional traffic controls to minimize traffic delays and inconvenience caused by construction activities.

Water Quality

A Storm Water Data Report- Short Form (SWDR) has been prepared for this project (see attachment G). The anticipated total disturbed soil area is 0.23 acre. The project will not require Treatment Best Management Practices (BMPs). The project requires a Water Pollution Control Program (WPCP) because the total disturbed soil area is less than one acre. The proposed project must adhere to the requirements set forth in the National Pollution Discharge Elimination System (NPDES).

Permits

It is anticipated that an encroachment permit will be required for construction on locations 1 and location 3. A drainage easement is anticipated on project location 2. Coordination with appropriate local agency (City/County) will take place during subsequent phases.

Cooperative Agreements

No cooperative agreement is required for the project.

Electrical work

Electrical work is required at location 1 and location 2. Location 1 will need signal modification (loops and signal pole relocation) at an estimated cost of $25,000. Location 2 will need modification of an existing Traffic Monitoring Station at an estimated cost of $ 25,000.

Geotechnical

The construction of the new sidewalk along SR49 (at Location 2) at PM 18.7 will require cutting back the existing embankment. A Type 1 retaining wall is proposed to protect/stabilize the slope exposed during sidewalk construction. A Preliminary Geotechnical Report has been prepared (see attachment I).

9. COMMUNITY INVOLVEMENT

This project is generated by community concerns, upon complaint by local residents.

Also, coordination with local agencies (City, County) is required for encroachment permits.

10. ENVIRONMENTAL DETERMINATION/DOCUMENT

A Preliminary Environmental Analysis Report was signed on June 21, 2011 (see attachment H). The anticipated state environmental document will be Categorically Exempt under the California Environmental Quality Act and is Categorically Excluded under the National Environmental Policy Act. Environmental mitigation parcels are not required. Environmental studies will begin once the project is programmed and formal request is submitted. The expected environmental studies are listed in attached Preliminary Environmental Analysis Report.
The following permits will be required:

Department/Agency	Permit Required
California Department of Fish and Game	1602 Lake or Streambed Alteration Agreement
United States Army Corps of Engineers	404 Dredge and Fill Permit
Regional Water Quality Control Board	401 Water Quality Certification

11. FUNDING

11A. CAPITAL COST

It is proposed to program this project in the 2010 SHOPP in the 2013/2014 fiscal year. Funding will be from Pedestrian Infrastructure Program (201.378). The July 2011 cost estimate is $1,691,000 for construction, and $34,363 for right of way. The escalated project capital cost for fiscal year 13/14 is $1,794,000 for construction and $37,885 for right of way.

Note: (1) Construction capital costs are escalated at 3.0% per year and R/W costs are escalated at 5.0% per year.

11B. CAPITAL SUPPORT ESTIMATE

Project Cost Component	Fiscal Year					Total
	11/12	12/13	13/14	14/15	15/16	
PA&ED	$153.3	$86.0	0	0	0	$239.3
PS&E	$0	$294.8	$244.7	$0		$539.5
R/W Support	$0	$45.1	$38.4	$26.0	$13.5	$123.0
R/W Prop Mgmt & XS Lands	0	$0.4	$1.0	$1.0	$0.5	$2.9
Construction Support			$81.8	$244.6	$23.9	$350.3
Total	**$153.3**	**$426.3**	**$365.9**	**$271.6**	**$37.9**	**$1255.0**

Note: (1) All costs are in $1000's. Support costs are escalated at 3.1% per year.
(2) Support categories are the same as those identified by SB 45.
(3) Support costs for preceding years are shown in FY 11/12. Dollar value un-escalated due to past or current year.

12. SCHEDULE

HQ Milestones	Delivery Date (Month, Day, Year)
Begin Environmental (M020)	01/02/2012
PA & ED (M200)	10/01/2012
Regular Right of Way (M225)	01/15/2013
PS&E to DOE (M377)	09/06/2013
Right of Way Certification (M410)	11/29/2013
Ready to List (M460)	12/16/2013
HQ Advertise (M480)	01/20/2014
Award Contract (M495)	03/24/2014
Approve Contract (M500)	04/14/2014
Contract Acceptance (M600)	12/31/2014
Final Report (M700)	04/30/2015

13. FHWA COORDINATION

Per the *2009 Federal Transportation Act*, this project is eligible for federal-aid funding and is considered to be STATE-AUTHORIZED under current FHWA-Caltrans Stewardship Agreements.

14. DISTRICT CONTACTS

FUNCTIONAL UNIT	NAME	PHONE NUMBER
Project Manager	Arvinder Bajwa	(209) 948-7988
Design Manager	Caroline Reyes	(209) 948-7761
Assistant Project Manager	Jagmohanjit Brar	(209) 948-3737
Project Engineer	Gurwinder Sekhon	(209) 948-7754
Environmental Planner	Jonathan Schlee	(209) 942-6011
Right of Way	Anthony Dorn	(209) 948-3858
Traffic Safety	Duper Tong	(209) 948-7859
Maintenance Engineer	Ali Juma	(209) 948-7373
Senior Environmental Planner	Mary Oliva	(209) 941-1919
Construction Manager	Bob Nijjar	(209) 724-9057
Survey Manager	Hanna Kassis	(209) 942-6166

15. PROJECT REVIEWS

Field Review	PDT	Date	03/09/11
District Maintenance	Ali Juma	Date	08/02/11
District Safety Review	Mark Orr	Date	08/04/11
Constructability Review	PDT	Date	07/25/11
HQ Design Coordinator	Antonette Clark	Date	07/27/11
District SHOPP Program Advisor	Duper Tong	Date	07/25/11

16. ATTACHMENTS

A. Vicinity Map/Title Sheet
B. Typical Cross Section
C. Layout (L-1 to L-3)
D. Cost Estimate
E. Right of Way Data Sheet
F. Transportation Management Plan Checklist
G. Storm Water Data Report
H. Preliminary Environmental Analysis Report and MCC
I. Preliminary Geotechnical Report

INDEX OF PLANS

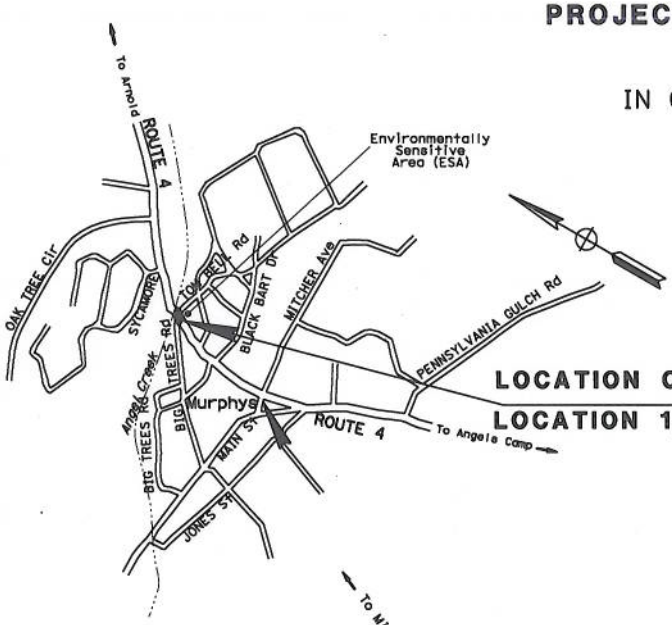
STATE OF CALIFORNIA
DEPARTMENT OF TRANSPORTATION

PROJECT PLANS FOR CONSTRUCTION ON STATE HIGHWAY

IN CALAVERAS AND MERIPOSA COUNTIES
AT
VARIOUS LOCATIONS

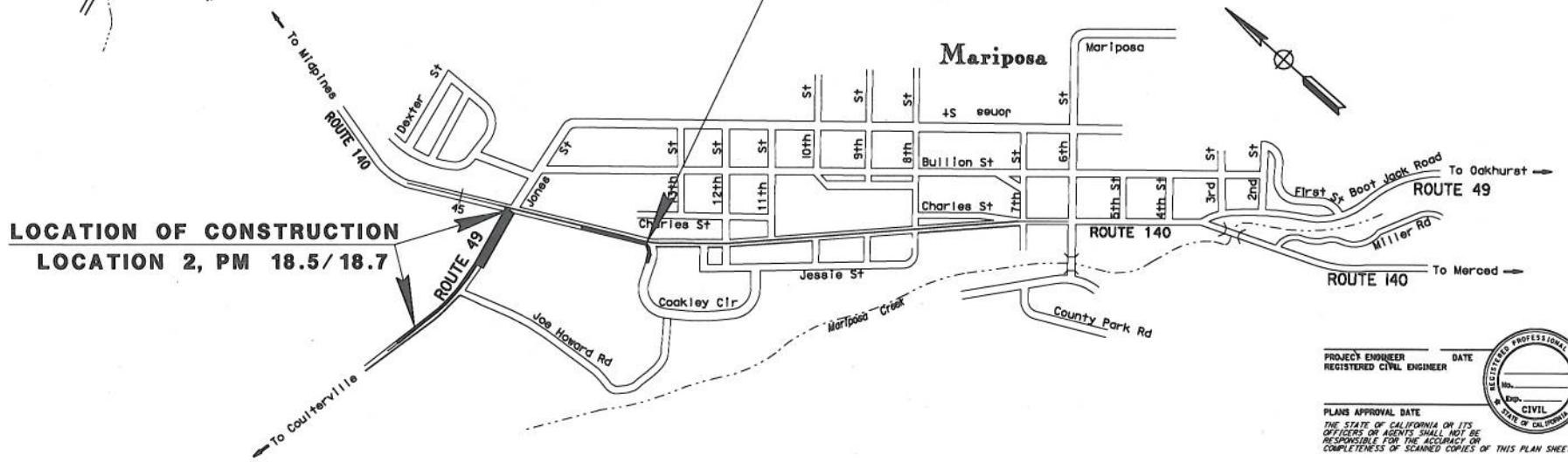
TO BE SUPPLEMENTED BY STANDARD PLANS DATED MAY 2006

Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
	Cal, Mpa	4,49,140	Var		



LOCATION OF CONSTRUCTION
LOCATION 1, PM 29.62

LOCATION OF CONSTRUCTION
LOCATION 3, PM 21.8



LOCATION OF CONSTRUCTION
LOCATION 2, PM 18.5/18.7

PROJECT MANAGER	ARVINDER BAJWA
DESIGN ENGINEER	CAROLINE REYES

PROJECT ENGINEER DATE
REGISTERED CIVIL ENGINEER

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

DATE PLOTTED => 02-SEP-2011
TIME PLOTTED => 10:45
LAST REVISION 00-00-00

THE CONTRACTOR SHALL POSSESS THE CLASS (OR CLASSES) OF LICENSE AS SPECIFIED IN THE "NOTICE TO BIDDERS."

NO SCALE

CONTRACT No.	10-0V3004
PROJECT ID	1000020458

BORDER LAST REVISED 7/2/2010 | CALTRANS WEB SITE IS: HTTP//WWW.DOT.CA.GOV/ | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | USERNAME => e132625 DGN FILE => 101000020458ab01.dgn | UNIT 1453 | PROJECT NUMBER & PHASE 1000020458K

Attachment A

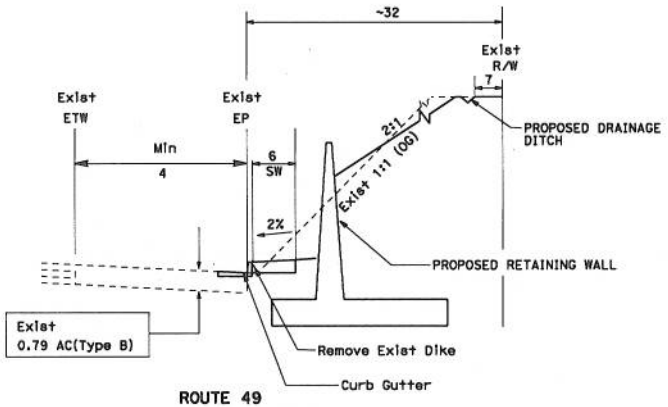
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Cal;Mpa	4; 49,140	Var		

REGISTERED CIVIL ENGINEER DATE

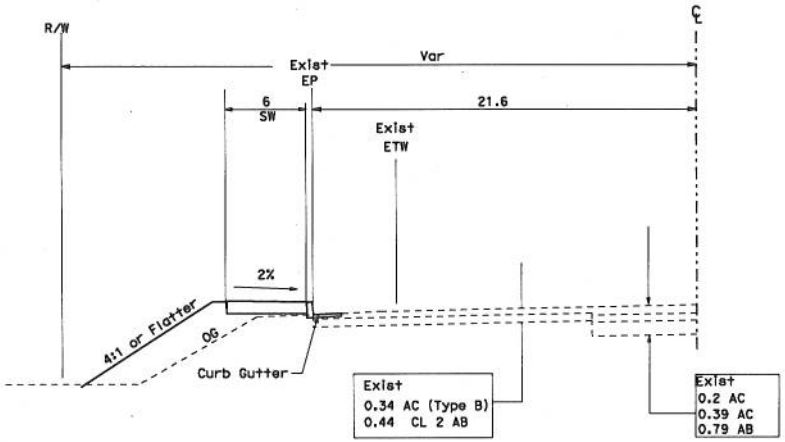
PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

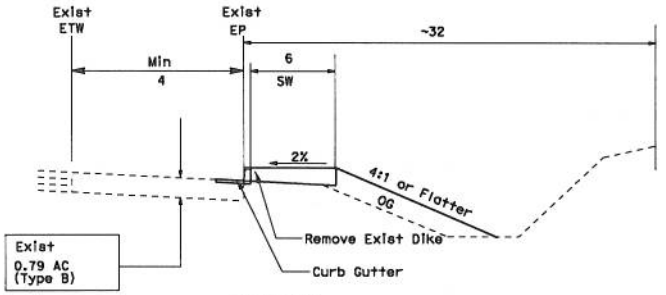
REGISTERED PROFESSIONAL ENGINEER — CIVIL — STATE OF CALIFORNIA



ROUTE 49
Sta 6+90 TO 11+80 Rt



ROUTE 49
Sta 2+00 To 3+30 Lt



ROUTE 49
Sta 2+90 To 6+20 Rt

Preliminary Design

TYPICAL CROSS SECTION

No Scale

X-1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION
DESIGN
FUNCTIONAL SUPERVISOR: CAROLINE REYES
CALCULATED-DESIGNED BY
CHECKED BY
REVISED BY
DATE REVISED

LAST REVISION DATE PLOTTED => 02-SEP-2011
00-00-00 TIME PLOTTED => 10:46

BORDER LAST REVISED 7/2/2010
USERNAME => a132625
DGN FILE => 10100020458ca01.dgn
RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3
UNIT 1453
PROJECT NUMBER & PHASE 1000020458K

Attachment B

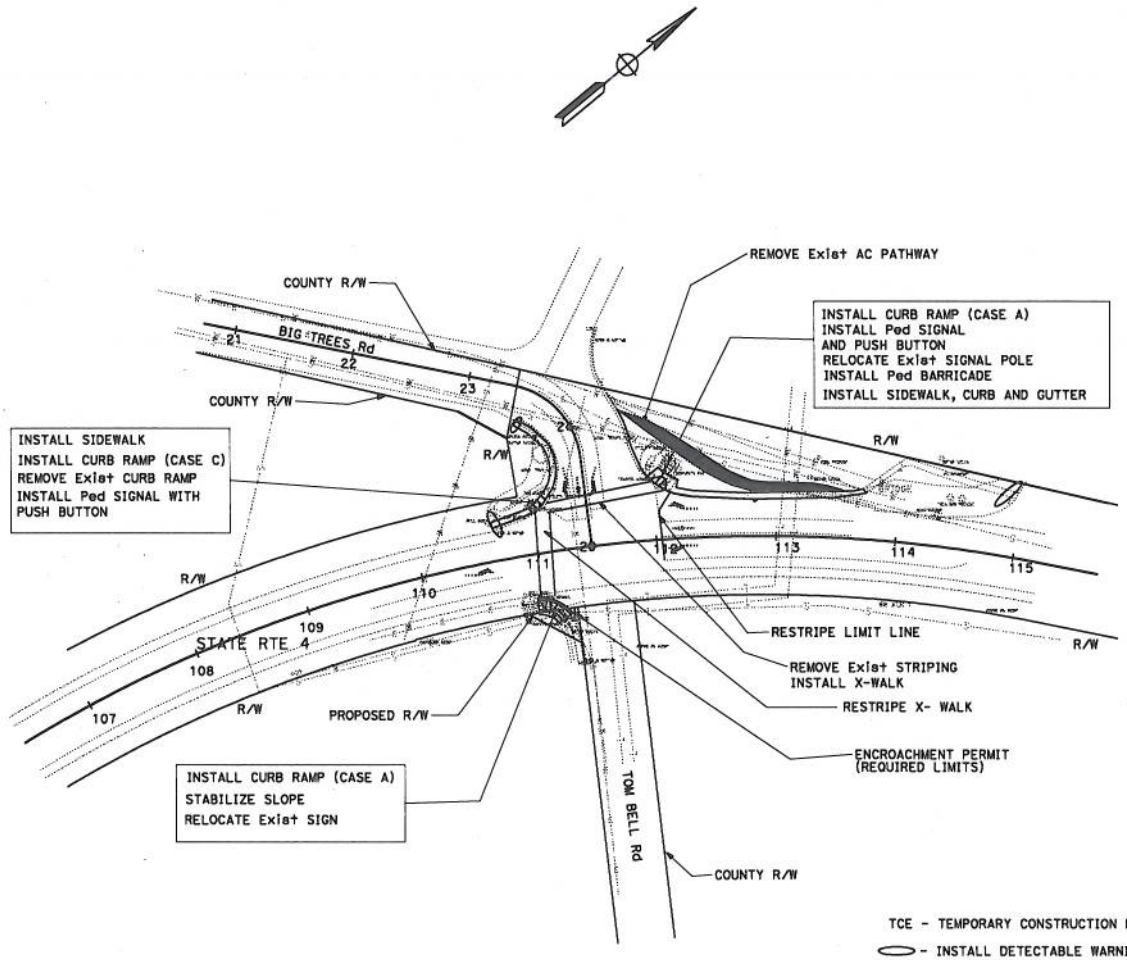
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Cal;Mpa	4; 49,140	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA



PRELIMINARY DESIGN

LOCATION 1

NO SCALE

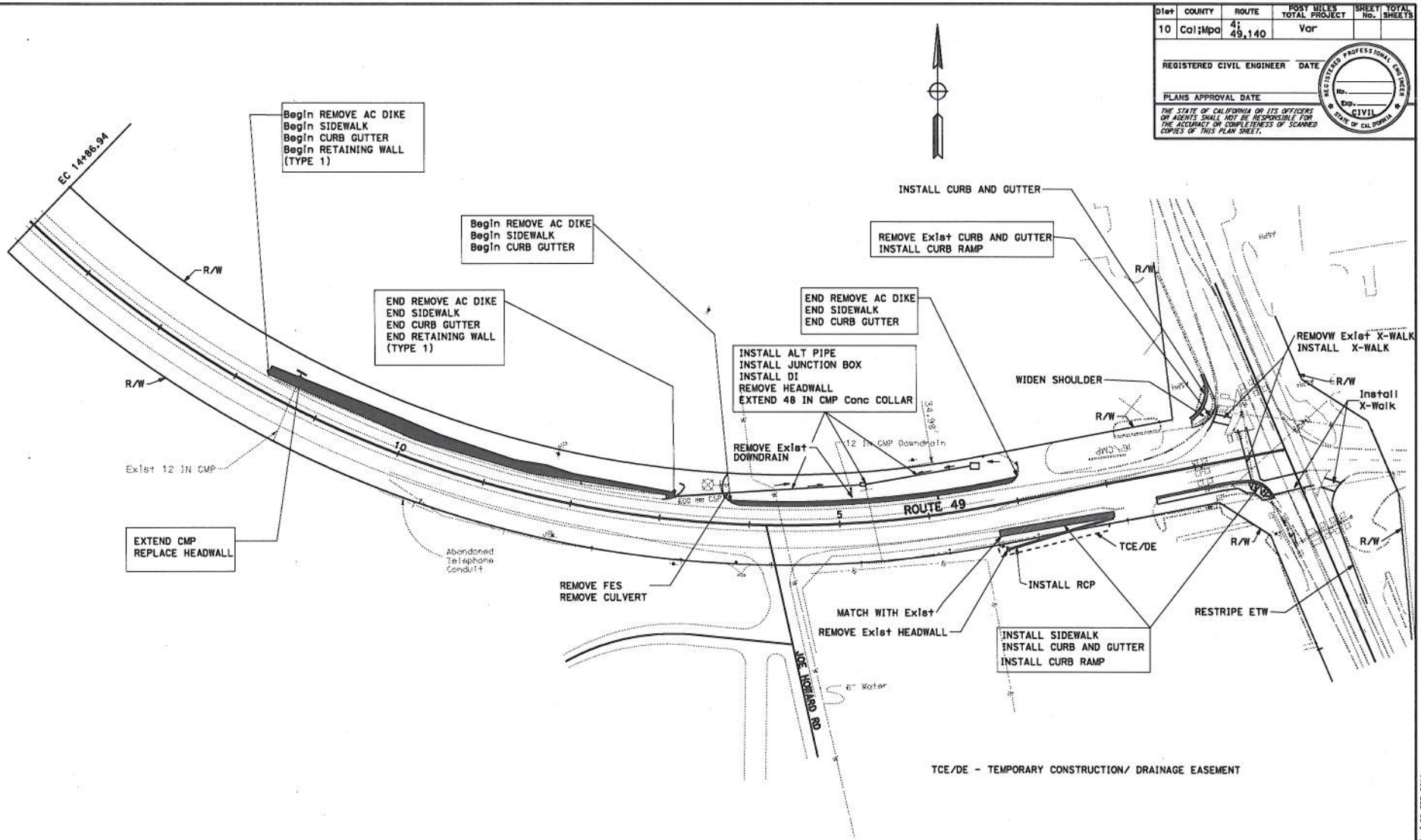
LAYOUT -1

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION | DESIGN | FUNCTIONAL SUPERVISOR: CAROLINE REYES | CALCULATED-DESIGNED BY | CHECKED BY | REVISED BY | DATE REVISED

LAST REVISION 00-00-00 | DATE PLOTTED => 02-SEP-2011 | TIME PLOTTED => 10:47

BORDER LAST REVISED 7/2/2010 | USERNAME => s132625 | DGN FILE => 101000020458ea01.dgn | RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3 | UNIT 1453 | PROJECT NUMBER & PHASE 1000020458K

Attachment C1



Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Cal;Mpa	4; 49,140	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.

REGISTERED PROFESSIONAL ENGINEER — No. — Exp. — CIVIL — STATE OF CALIFORNIA

TCE/DE - TEMPORARY CONSTRUCTION/ DRAINAGE EASEMENT

PRELIMINARY DESIGN

LOCATION 2

NO SCALE

LAYOUT -2

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR: CAROLINE REYES

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 02-SEP-2011

TIME PLOTTED => 10:48

BORDER LAST REVISED 7/2/2010

USERNAME => s132625

DGN FILE => 101000020458es02.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1453

PROJECT NUMBER & PHASE 1000020458K

Attachment C2

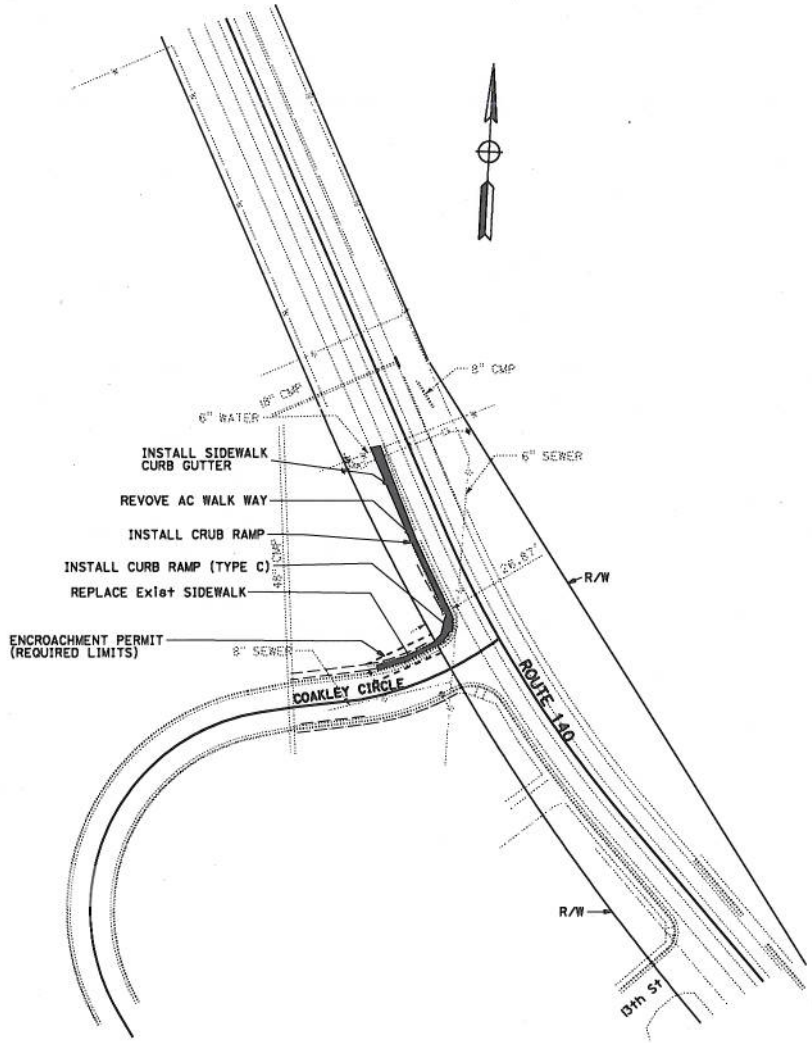
Dist	COUNTY	ROUTE	POST MILES TOTAL PROJECT	SHEET No.	TOTAL SHEETS
10	Cal;Mpa	4; 49,140	Var		

REGISTERED CIVIL ENGINEER DATE

PLANS APPROVAL DATE

REGISTERED PROFESSIONAL ENGINEER No. Exp. CIVIL STATE OF CALIFORNIA

THE STATE OF CALIFORNIA OR ITS OFFICERS OR AGENTS SHALL NOT BE RESPONSIBLE FOR THE ACCURACY OR COMPLETENESS OF SCANNED COPIES OF THIS PLAN SHEET.



PRELIMINARY DESIGN

LOCATION 3

NO SCALE

LAYOUT-3

STATE OF CALIFORNIA - DEPARTMENT OF TRANSPORTATION

DESIGN

FUNCTIONAL SUPERVISOR: CAROLINE REYES

CALCULATED-DESIGNED BY

CHECKED BY

REVISED BY

DATE REVISED

LAST REVISION 00-00-00

DATE PLOTTED => 02-SEP-2011

TIME PLOTTED => 10:49

BORDER LAST REVISED 7/2/2010

USERNAME => e132625

DGN FILE => 101000020458ea03.dgn

RELATIVE BORDER SCALE IS IN INCHES 0 1 2 3

UNIT 1453

PROJECT NUMBER & PHASE 1000020458K

Attachment C3

PLANNING COST ESTIMATE

Dist-Co-Rte: 10-Cal,Mpa,Mpa-4,49,140
PM: 29.62,18.5/18.7,21.8
EA: 10-0V300K
Program Code: 20.10.201.378

PROJECT DESCRIPTION:

Limits: In Calaveras and Mariposa Counties at Various Locations.

Proposed Improvement: (Scope of Work)
Pedestrian Accessibility Improvements on intersection of SR4 and Big Trees/Tom Bell Rd in the City of Murphy's in Calaveras County, and at various locations on SR 49 and 140 in North Mariposa.
The work involves constructing ADA ramps, installing sidewalks, removing existing AC pathway, slope protection and drainage improvements on Rte 4 (PM 29.62) in Calaveras County ,on Rte 49 (PM18.5/18.7) and Rte 140 (PM 21.8) in Mariposa County.

Alternative: Build

SUMMARY OF PROJECT COST ESTIMATE

TOTAL ROADWAY ITEMS	Total of Sections 1 - 10 shown above	$ 1,691,000
TOTAL STRUCTURES ITEMS		$ 0
SUBTOTAL CONSTRUCTION COSTS		$ 1,691,000
TOTAL RIGHT OF WAY ITEMS (Not Escalated)		$ 34,363
TOTAL PROJECT CAPITAL OUTLAY COSTS		$ 1,725,000

Reviewed by District Program Manager: D Bajwa (Signature) 08/23/2011 (Date)

Approved by Project Manager: D Bajwa (Signature) 08/23/2011 (Date)

Phone Number: (209) 948-7988

Form revised 12/01/09

I. ROADWAY ITEMS

Section 1 - Earthwork	Quantity	Unit	Unit Price	Item Cost	Section Cost
Roadway Excavation	230	CY	$150	$34,500	
Imported Borrow/Fill	1,000	CY	$33	$33,000	
Clearing & Grubbing	1	LS	$2,000	$2,000	
Street Sweeping	1	LS	$10,000	$10,000	
Top Soil Reapplication			$0	$0	
Slope Grading	1,400	Sqyd	$20	$28,000	
Rounding (Contour Grading)	0	LS	$0	$0	
			$0	$0	
				Subtotal Earthwork:	$107,500

Section 2 - Pavement Structural Section*						
PCC Pvmt	Depth	0	CY	$0	$0	
PCC Pvmt	Depth	0	CY	$0	$0	
HMA		60	Ton	$150	$9,000	
Grind AC Pavement		1	LS	$2,000	$2,000	
Cement-Treated Base		0	CY	$0	$0	

Attachment D

Caltrans

Dist-Co-Rte: 10-Cal,Mpa,Mpa-4,49,140
PM: 29.62,18.5/18.7,21.8
EA: 10-0V300K
Program Code: 20.10.201.378

Class 2 AB	0	CY	$0	$0	
Treated Permeable Base	0	CY	$0	$0	
Aggregate Subbase	0	CY	$0	$0	
Pavement Reinforcing Fabric	0	SF	$0	$0	
Edge Drains	0	FT	$0	$0	
				$0	
			Subtotal Pavement Structural Section:		$11,000
Section 3 - Drainage					
Large Drainage Facilities		LS	$0	$0	
Storm Drains	0	LS	$0	$0	
CMP/Conc. Collar	10	Ft	$1,000	$10,000	
Project Drainage (GDO inlet,Alternative Pipe)	1	LS	$86,450	$86,450	
Junction Box	2	ea	$15,000	$30,000	
Remove Exist Drainage Facilities	1	LS	$7,900	$7,900	
Other Items	1	LS	$300	$300	
			Subtotal Drainage:		$134,650

* Reference sketch showing typical pavement structural section elements of the roadway. Include (if available) T.I., R-Value and date when tests were performed.

Section 4 - Specialty Items	Quantity	Unit	Unit Price	Item Cost	Section Cost
Retaining Walls	4,000	SF	$105	$420,000	
Minor Concrete	483	CY	$525	$253,575	
Barriers and Guardrails	1	LF	$500	$500	
Prepare WPC	1	LS	$1,200	$1,200	
Water Pollution Control	1	LS	$31,400	$31,400	
Hazardous Waste Investigation and/or Mitigation Work	0	LS	$0	$0	
Environmental Compliance	0	LS	$0	$0	
Resident Engineer Office Space	0	LS	$0	$0	
Install Detectable Warning Surface	4	EA	$500	$2,000	
			Subtotal Specialty Items:		$708,675
Section 5 - Traffic Items					
Lighting	0	LS	$0	$0	
Traffic Delineation Items	1	LS	$6,788	$6,788	
Modify Traffic Signals	1	LS	$20,000	$20,000	
Modify TMS	1	LS	$25,000	$25,000	
Roadside Signs	1	EA	$1,400	$1,400	
Traffic Control Systems	1	LS	$28,000	$28,000	
PCMS	1	LS	$11,000	$11,000	
Maintain Traffic	1	LS	$10,000	$10,000	
PIO	1	LS	$4,000	$4,000	
Detectable Warning System	4	EA	$500	$2,000	
Other	0	EA	$0	$0	
Construction Area Signs	1	LS	$9,500	$9,500	
			Subtotal Traffic Items:		$117,688

Attachment D

Dist-Co-Rte: 10-Cal,Mpa,Mpa-4,49,140
PM: 29.62,18.5/18.7,21.8
EA: 10-0V300K
Program Code: 20.10.201.378

II. ROADSIDE ITEMS

Section 6 Planting and Irrigation	Quantity	Unit	Unit Price	Item Cost	Section Cost
Highway Planting	0	LS	$0	$0	
Replacement Planting	0	LS	$0	$0	
Irrigation Modification	0	LS	$0	$0	
Relocate Existing Irrigation	0	LS	$0	$0	
Facilities	0	LS	$0	$0	
Irrigation Crossovers	0	LS	$0	$0	
				$0	
			Subtotal Planting and Irrigation Section:		$0

Section 7: Roadside Management and Safety Section	Quantity	Unit	Unit Price	Item Cost	Section Cost
Vegetation Control Treatments	0	LS	$0	$0	
Gore Area Pavement	0	LS	$0	$0	
Pavement beyond the gore area	0	LS	$0	$0	
Miscellaneous Paving	0	LS	$0	$0	
Erosion Control	0	LS	$0	$0	
Slope Protection	0	LS	$0	$0	
Side Slopes/Embankment Slopes	0	LS	$0	$0	
Maintenance Vehicle Pull outs					
Off-freeway Access (gates, stairways, etc.)					
Roadside Facilities (Vista Points, Transit, Park & Ride, etc)	0	LS	$0	$0	
Relocating roadsice facilities/features	0	LS	$0	$0	
				$0	
			Subtotal Roadside Management and Safety Section:		$0

TOTAL SECTIONS 1 thru 7 $1,079,513

NOTE:Extra lines are provided for items not listed; use additional lines as appropriate.

Attachment D

PLANNING COST ESTIMATE

Dist-Co-Rte: 10-Cal,Mpa,Mpa-4,49,140
PM: 29.62,18.5/18.7,21.8
EA: 10-0V300K
Program Code: 20.10.201.378

III. ROADWAY ADDITIONS

Section 8 - Minor Items

					Item Cost	Section Cost
(Subtotal Sections 1 thru 7)	$1,079,513	x	0.08 (5 to 10%)	=	$86,361	
				TOTAL Minor Items:		$86,361

Section 9 - Roadway Mobilization

(Subtotal Sections 1 thru 8)	$1,165,874	x	0.10 (10%)	=	$116,587	
				TOTAL Roadway Mobilization:		$116,587

Section 10 - Supplemental Work & Contingencies

Supplemental Work

(Subtotal Sections 1 thru 8)	$1,165,874	x	0.10 (5 to 10%)	=	$116,587	

Contingencies

(Subtotal Sections 1 thru 8)	$1,165,874	x	0.25 (**%)	=	$291,469	
				Supplemental Work & Contingencies:		$408,056
				TOTAL ROADWAY ADDITIONS Sections 8 thru 10:		$611,004
				TOTAL ROADWAY ITEMS: (Subtotal Sections 1 thru 10)		$1,690,517

Estimate Prepared by: Gurwinder Sekhon (Print or Type Name) Phone: 209-948-7754 08/02/11 (Date)

Estimate Checked by: Caroline Reyes (Print or Type Name) Phone: 209-948-7761 08/02/11 (Date)

**Use appropriate percentage per PDPM, Part 3 Chapter 20.
http://www.dot.ca.gov/hq/oppd/pdpm/pdpmn.htm - pdpm

II. STRUCTURE ITEMS

Attachment D

PLANNING COST ESTIMATE

Dist-Co-Rte: 10-Cal,Mpa,Mpa-4,49,140
PM: 29.62,18.5/18.7,21.8
EA: 10-0V300K
Program Code: 20.10.201.378

	STRUCTURE No. 1	No. 2	No. 3	
Bridge Name				
Structure Type				
Width (out to out) - (ft)	0			
Span Length - (ft)	0	0	0	
Total Area - ft²	0	0	0	
Footing Type (pile/spread)	0	0	0	
Cost per ft² (incl. 10 % mobilization and 20 % contingency)	0	0	0	
Total Cost for Structure	$0	$0	$0	

SUBTOTAL STRUCTURES ITEMS $0
(Sum of Total Cost for Structures)

Railroad Related Costs (Not incl. in R/W Est)				
				$0
				$0

SUBTOTAL RAILROAD ITEMS $0

TOTAL STRUCTURES ITEMS $0
(Sum of Structures items plus Railroad Items)

COMMENTS:

Estimate Prepared by: _____ Phone: _____ 0/0/00
(Print or Type Name) (Date)

(If appropriate, attach additional pages as backup)

III. RIGHT OF WAY ITEMS

No. of years for Escalation = 2

	Current Values	Rate (%)	Escalation Factor		Escalated Values
A. Acquisition, including excess lands, damages to remainder(s) and Goodwill	$4,360	5.0	1.10	-	$4,807
B. Utility Relocation (State Share)	$20,400	5.0	1.10	-	$22,491
C. Relocation Assistance	$0	5.0	1.10	-	$0
D. Mitigation	$5,653	5.0	1.10	-	$6,232

Attachment D

PLANNING COST ESTIMATE

Dist-Co-Rte: 10-Cal,Mpa,Mpa-4,49,140
PM: 29.62,18.5/18.7,21.8
EA: 10-0V300K
Program Code: 20.10.201.378

E. Title and Escrow Fees	$3,950	5.0	1.10	=	$4,355
TOTAL RIGHT OF WAY ITEMS=**	$34,363				$37,885
					(Escalated Value)

Anticipated Date of Right of Way Certification: 07/15/14
(Date to which Values are Escalated)

F. Construction Contract Work

Brief Description of Work

Right of Way Branch Cost Estimate for Work* $0

* This dollar amount is to be included in the Roadway and/or Structures Items of Work, as appropriate. Do not include in Right of Way Items

COMMENTS:

Estimate received from Right of Way

Estimate Prepared by: _____ Phone: _____ _____
(Print or Type Name) (Date)

(If appropriate, attach additional pages and backup including Right of Way Data Sheet and Environmental Mitigation and Compliance Cost Estimate Sheet).

Form last revised December 1, 2009

Attachment D

State of California Business, Transportation and Housing Agency

Memorandum

To: Arvinder Bajwa
Stockton PPM

Attn Gurwinder Sekhon
Stockton Design IV,B-H
Eric Chin
Stockton Design IV,B-H

From: Department of Transportation
Division of Right of Way Central Region

Date: 8/8/2011

File: CD 10 EA 0v300k Alt n/a
Co Cal RTE 04

DESCRIPTION:
Pedestrian Accessibility Improvements on intersection of SR4 and Big Trees/Tom Bell Rd in the City of Murphy's in Calaveras County, and at various locations on SR 49 and

Subject: RIGHT OF WAY DATA SHEET

We have completed an estimate of the right of way costs for the above-referenced project based on the Right of Way Data Sheet Request Form dated 6/1/2011

The following assumptions and limiting conditions were identified:

Appraisal
THERE ARE NO PARCELS ANTICIPATED FOR ENVIRONMENTAL MITIGATION FOR THIS ESTIMATE; HOWEVER, PERMIT FUNDING OF $4,522 IS REQUIRED AND INCLUDED.

Utility
Positive Location needs to be performed on underground utilities to determine if there are conflicts. Most of the utilities within project limits have been installed under Encroachment Permit.

Right of Way Lead Time will require a minimum of 9 months after we receive Certified Appraisal Maps and/or Utility Conflict Plans, obtained necessary environmental clearance and applicable freeway agreements have been approved.

For JAMES GONZALEZ
Assistant Region Division Chief, Right of Way
(209) 948-7844

Attachment E

EA: 10-0v300k CO/RTE/PM-PM (Rte 1 and Rte 2) : Cal/04/29.6-21.8 & Mpa/49/18.5-21.8 Request Date: 6/1/2011
ALT: n/a Revised Date:

Right Of Way Cost Estimate

	Current Year 2011	Contingency Rate	Right of Way Escalation Rate	Escalated Year 2013
Acquisition:	$4,360	25%	5%	$4,807
Mitigation:	$5,653	25%	5%	$6,232
State Share of Utilities:	$20,400	25%	5%	$22,491
Expert Witness:	$0	25%	5%	$0
Relocation Assistance:	$0	25%	5%	$0
Demolition and Clearance:	$0	25%	5%	$0
Title and Escrow:	$3,950	25%	5%	$4,355
Ad Signs:	$0	25%	5%	$0
Total Current Value: If RW Cost Est fields are blank, Costs = $0	$34,362			$37,884

Estimated Construction Contract Work (CCW): R/W LEAD TIME/Mo. 9

Cost Break Down

Pot Hole	16,320
Mitigation	
Land	0
Bank	0
Permit Fee	4,522

RR Involvement

Railroad Facilities or Right of Way Affected?	No
Const/Maint Agreement:	
Service Contract:	
Right of Entry:	
Clauses:	
Estimated Lead-time	

Parcel Data

# of Parcel Type X:			
# of Parcel Type A: less than $10,000 non-complex	3		
# of Parcel Type B: more than $10,000 non-complex			
# of Parcel Type C: complex, special valuation			
# of Parcel Type D: most complex and time consuming		# of Duals Needed:	
Totals:	3	Totals:	0

# of Excess Parcels: 0

Utilities

U4-1: Owner Expense	2
U4-2: State Expense, Conventional no Fed Aid	1
U4-3: State Expense, Freeway no Fed Aid	0
U4-4: State Expense, both with Fed Aid	1
U5-7: Utility verification, no relocation/potholing	4
U5-8: Utility verification, w/ some relocation/potholing	8
U5-9: Utility verifications, relocation/potholing required	1

Misc R/W Work

# of RAP Displacements:	0
# of Clearance/Demos:	
# of Const Permits:	
# of Condemnations:	

EA: 10-0v300k ALT: n/a

Parcel Area	
Total R/W Required:	400
Total Excess Area:	0

General Description of R/W and Excess Lands Required (zoning, use, major improvements, critical or sensitive parcels, etc.):
THE PROPOSED ACUISITION ARE FOR RIGHT OF WAY PURPOSES CONSISTS OF 2,857 SF OF LAND FROM COMMERCIAL PROPERTIES.

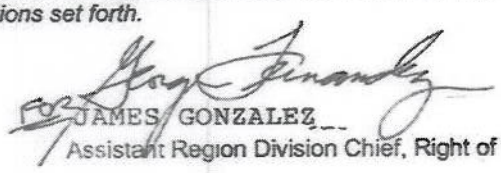
General Description of Utility Involvement:
Per Design excavation for this project to be 6" - 1'.

Is there a significant effect on assessed valuation:	No
Were any previously unidentified sites with hazardous waste or material found:	No
Are RAP displacements required:	No
# of single family:	# of muliti-family: # of business/nonprofit: # of farms:
Sufficient replacement housing will be available without last resort housing:	N/A
Are material borrow or disposal sites required:	No
Are there potential relinquishments or abandonments:	No
Are there any existing or potential airspace sites:	No
Are environmental mitigation parcels required:	No

Data for evaluation provided by:

Estimator:	JULIE KELLEY	6/15/2011
Railroad Liaison Agent:	Maria Toles	8/5/2011
Utiltiy Relocation Coordinator:	Andrea Alvarez	6/22/2011

I have personally reviewed this Right of Way Sheet and all supporting information. I find this Data Sheet complete and current, subject to the limiting conditions set forth.



Date

ENTERED PMCS 8/8/2011

BY: c weaver

JAMES GONZALEZ
Assistant Region Division Chief, Right of Way

State of California — Business, Transportation and Housing Agency

D-10 TRANSPORTATION MANAGEMENT PLAN CHECKLIST

District - Project No: 10 0002 0458
Date Prepared: March 16, 2011
Prepared By: Corey Casey
Requested By: Gurwinder Sekhon

Co.-Rte.-P.M. CAL; MPA-4; 49,140 - 29.62; 18.5/18.7-21.8
Location: VAR

Stage of Project (X box) [X] PID [ ] PSR [ ] PR [ ] PS&E

Description: Construct 7 new ADA ramps and install sidewalks at various locations and improve on shoulder on RTE 49

	Date Signed	Date Signed	Date Signed	Date Signed

	REQUIRED	RECOMMENDED	NOT APPLICABLE	BEES Item No.	COMMENTS	ITEM COST	REQUIRED IN SPEC.
1.0 Public Information Strategies							
1.1 Brochures and Mailers	X				RE to hand-deliver to business/residences.		
1.2 Media Releases (& minority media sources)	X						
1.3 Paid Advertising			X				
1.4 Public Information Center		X			See comments below.		
1.5 Public Meetings/Speakers Bureau		X		066083	Designer to add to budget if public meeting is added.		
1.6 Project Telephone Hotline			X				
1.7 Internet, E-Mail			X				
1.8 Local cable TV and News			X				
1.9 Notification to Impacted groups (i.e. bicycle users, pedestrians with disabilities, others)	X				Designer to verify impacted groups.		
1.10 Project Web Page			X				
1.11 Caltrans Public Information Office	X			066063	Items 1.1 to 1.11 to be handled by CT PIO.	$4K	
1.12 Consultant Public Information Office			X				
1.13 Other items			X				
2.0 Traveler Information Strategies							
2.1 Changeable Message Signs (permanent)			X				
2.2 Changeable Message Signs (portable)	X			128850	See comments below	$11K	X
2.3 Special Construction Signs			X	120890			
2.4 Traveler Information Systems (CHIN/Internet)		X		861985	As required.		
2.5 Highway Advisory Radio "HAR" (fixed or mobile)			X	860520			
2.6 Radar Speed Sign			X	066064			
2.7 Traffic Management Team			X				
2.8 Revised Transit Schedules/ Maps			X				
2.9 Bicycle community information	X				Same as Item 1.9.		
2.10 Other items			X				
3.0 Incident Management							
3.1 COZEEP			X	066062	See comments below		
3.2 Freeway Service Patrol (tow truck service patrol)			X	066065			
3.3 Traffic Surveillance Stations (loops or CCTV)	X			066878	Existing to remain &/or provide new stations.		
3.4 Transportation Management Center	X				RE to notify for incident & status closure.		
3.5 Traffic Control Inspector (Caltrans)		X					
3.6 Traffic Management Team	X				TMC will contact TMT as needed.		
3.7 On-site Traffic Advisor (contractor)		X					
3.8 Other Items			X				
4.0 Construction Strategies							
4.1 Delay damage clause			X				
4.2 Night work	X				Per Lane Closure Charts		X
4.3 Weekend Work			X				
4.4 Extended Weekend Closures			X				
4.5 Planned Lane Closures	X				Per Lane Closure Charts		X
4.6 Planned Ramp Closures/Connector Closure			X				
4.7 Total Facility Closure			X				
4.8 Project Phasing			X				
4.9 Truck Traffic Restrictions			X				
4.10 Reduced Lane Widths			X				
4.11 Temporary K-Rail			X	129000			
4.12 Temporary Traffic Screens			X	129150			
4.13 Reduced Speed Zones			X				
4.14 Traffic Control Improvements	X				As necessary.		

Attachment F

4.0 Construction Strategies (Continued)	REQUIRED	RECOMMENDED	NOT APPLICABLE	BEIS Item No.	COMMENTS	ITEM COST	REQUIRED IN SPEC.
4.15 Contingency Plans	X				Construction to determine items 4.15.1 thru. 4.15.9		X
4.15.1 Material Plant on standby							
4.15.2 Extra Critical Equipment on site							
4.15.3 Material Testing Plan							
4.15.4 Alternate Material on site (In case of failure or major delays)							
4.15.5 Emergency Detour Plan							
4.15.6 Emergency Notification Plan							
4.15.7 Weather Conditions Plan							
4.15.8 Delay Timing and Documentation Plan							
4.15.9 Late Closure Reopening Notification							
4.16 Signal timing modification			X				
4.17 Coordination with adjacent construction	X			07850	RE to confirm prior to scheduling of closures.		X
4.18 Double Fine Zone (signs)			X				
4.19 Right of Way Delay	X			066022	Designer to determine costs for maintaining traffic	TBD	X
4.20 ADA access to Pedestrian Facilities	X				See comments below.		X
4.21 Other Items	X				See comments below.		X
5.0 Demand Management							
5.1 HOV Lanes/Ramps			X				
5.2 Ramp metering			X				
5.3 Park-and-Ride Lots			X				
5.4 Parking Management/Pricing			X				
5.5 Rideshare Incentives			X				
5.6 Rideshare Marketing			X	066089			
5.7 Transit, Train, or Light-Rail Incentives			X	066066			
5.8 Transit Service Modification			X				
5.9 Variable Work Hours			X				
5.10 Telecommute			X				
5.11 Other Items			X				
6.0 Alternate Route Strategies							
6.1 Ramp Closures			X				
6.2 Street Improvements			X				
6.3 Reversible Lanes			X				
6.4 Temporary Lanes or Shoulders Use			X				
6.5 Freeway to freeway connector closures			X				
6.6 Other Items			X				
7.0 Other Strategies							
7.1 Application of new technology			X				
7.2 District Lane Closure Review Committee			X				
7.3 Other Items			X				

Comments:

1.4 Plan, progress/completion information should be available at Local Public Works, Chamber of Commerce Offices, and CT Maintenance Offices.
1.9 Impacted groups need to be notified and informed about upcoming construction. During construction, access across job site will be needed.
1.11 PIO estimated at $2k/mo. Or per stage construction or per major milestone.
2.2 PCMS Estimate: 2 units, one in each direction of travel to be used during traffic control operations.
4.20 Ensure that temporary routes, which are provided around and through construction along pedestrian facilities under Caltrans jurisdiction, are accessible to persons with disabilities when provided.
4.21 RE/Inspector shall maintain access to all business & residences at all times.

Approved by:

Corey Casey — DISTRICT TRAFFIC MANAGER

3/16/2011 — DATE

Attachment F

Lane Closure Restriction for Designated Legal Holidays and Special Days										
Thu	Fri	Sat	Sun	Mon	Tues	Wed	Thu	Fri	Sat	Sun
x	H xx	xx	xx							
	SD xx									
x	xx	H xx	xx							
		SD xx								
	x	xx	H xx	xx						
			SD xx	xxx						
	x	xx	xx	H xx	xx					
	x	xx	xx	SD xx	xxx					
				x	H xx	xxx				
				x	SD xx					
					x	H xx	xxx			
						SD xx				
						x	H xx	xx	xx	xx
							SD xx			

Legends:	
	Refer to lane closure charts
x	The full width of the traveled way shall be open for use by public traffic after 5:00 am.
xx	The full width of the traveled way shall be open for use by public traffic.
xxx	The full width of the traveled way shall be open for use by public traffic until 9:00 am.
H	Designated Legal Holiday
SD	Special Day

Attachment F

Chart No. 1 of 3
Conventional Highway Lane Requirements

County: CAL	Route/Direction: 4/EB-WB	PM: 29.62

Closure Limits: On State Route 4 in the City of Murphys from Tom Bell Dr to Big Trees Rd. (Location 1)

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Fridays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R										
Saturdays																									
Sundays																			R	R	R	R	R	R	

Legend:

R	Provide at least one through traffic lane, not less than 10 feet in width, for use by both directions of travel (Reversing Control)
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.
2. Closures of local roads will require City/County concurrence.

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than 2012

Attachment F

Chart No. 2 of 3
Conventional Highway Lane Requirements

County: MPA	Route/Direction: 49/NB-SB	PM: 18.5/18.7

Closure Limits: On State Route 49 in the City of Mariposa from 0.5 miles north of Mari Way to 0.7 miles north of Mari Way. (Location 2)

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	
Fridays	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R										
Saturdays																									
Sundays																				R	R	R	R	R	

Legend:

R	Provide at least one through traffic lane, not less than 10 feet in width, for use by both directions of travel (Reversing Control)
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.
2. Closures of local roads will require City/County concurrence.

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than 2012

Attachment F

Chart No. 3 of 3 Conventional Highway Lane Requirements		
County: MPA	Route/Direction: 140/EB-WB	PM: 21.9
Closure Limits: On State Route 140 in the City of Mariposa at the intersection of Coakley Circle. (Location 3)		

FROM HOUR TO HOUR	24	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Mondays through Thursdays	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	
Fridays	1	1	1	1	1	1	1	1	1	1	1	1	1	1											
Saturdays																									
Sundays																			1	1	1	1	1	1	

Legend:

1	Provide at least one through traffic lane open in direction of travel.
	Work permitted within project right of way where shoulder or lane closure is not required.

REMARKS:

1. See Lane Closure Restriction for Designated Legal Holidays and Special Days table in Maintain Traffic of these special provisions for additional closure restrictions.
2. Closures of local roads will require City/County concurrence.

Note to Design:

Above window must be re-evaluated or updated if actual construction takes place later than 2012

Attachment F

Short Form - Storm Water Data Report

Dist-County-Route: 10-Cal/Mpa – 04/49, 140
Post Mile Limits: 29.62/18.5 &18.7, 21.8
Project Type: Pedestrian Accessibility Improvements
Project ID (or EA): 1000020458 (10-0V300)
Program Identification: 201.378
Phase: ☒ PID
☐ PA/ED
☐ PS&E

Regional Water Quality Control Board(s): Central Valley RWQCB (5S, 5F)

1.	Is the project required to consider incorporating Treatment BMPs?	Yes ☐	No ☒
2.	Does the project disturb 5 or more acres of soil?	Yes ☐	No ☒
3.	Does the project disturb more than 1 acre of soil and not qualify for the Rainfall Erosivity Waiver?	Yes ☐	No ☒
4.	Does the project potentially create permanent water quality impacts?	Yes ☐	No ☒
5.	Does the project require a notification of ADL reuse	Yes ☐	No ☒

If the answer to any of the preceding questions is "Yes", prepare a Long Form – Storm Water Data Report.

Estimate Construction Start Date: July 2015 Construction Completion Date: October 2015

Separate Dewatering Permit (if yes, permit number) Yes ☐ Permit #_____ No ☒

Erosivity Waiver Yes ☐ Date: _____ No ☒

This Short Form – Storm Water Data Report has been prepared under the direction of the following Licensed Person. The Licensed Person attests to the technical information contained herein and the data upon which recommendations, conclusions, and decisions are based. Professional Engineer or Landscape Architect stamp required at PS&E.

Gurwinder Sekhon 7/18/2011

Gurwinder Sekhon, *Registered Project Engineer* *Date*

I have reviewed the stormwater quality design issues and find this report to be complete, current and accurate:

Marissa Nishikawa 7-21-2011

Marissa Nishikawa, *District/Regional SW Coordinator or Designee* *Date*

[Stamp Required for PS&E only]

Attachment G

Preliminary Environmental Analysis Report

Project Information

District:	10	**EA:**	0V300
County:	CAL	**Routes:**	4,49, 140
Postmile:	29.6, 18.5/18.7, &21.8		
Project Name:	Calaveras & Mariposa ADA Curb Ramps		
Env. Manager:	Mary Oliva	**Phone:**	209-941-1919
Project Manager:	Arvinder Bajwa	**Phone:**	209-948-7988
Design Senior	Caroline Reyes	**Phone:**	209-948-7761
Project Engineer:	Gurwinder Sekhon	**Phone:**	209-948-7754

Purpose and Need:
The purpose of this project is to improve mobility and pedestrian accessibility as outlined in the Department's Americans with Disabilities Act Transition Plan. The project is needed to ensure the pedestrian facilities at the identified locations are compliant with current ADA accessibility standards.

Description of work:
This project proposes to improve pedestrian accessibility facilities at various locations in Calaveras and Mariposa Counties. The project proposes improvements on SR 4 in Calaveras County, and on SR 49 and SR 140 in Mariposa County at various locations. The project proposes to excavate approximately 6 inches, install new sidewalk and ADA ramps. The project also proposes slope protection and drainage improvements on SR 49 at various locations.

At Location 1, in the City of Murphy's, the project proposal is to construct new ADA curb ramps at the Southwest and Northeast corners of SR4 and Tom Bell Rd/Big Trees Rd intersection. The existing ADA ramp at the Northwest corner of the intersection will be upgraded. Pedestrian signals with push buttons will be installed at the Northwest and Northeast corners of the intersection. Relocation of electrical signal pole at the Northeast corner, and detector loops at North of the intersection is anticipated. New R/W is required at the Southwest corner of the SR 4 and Tom Bell Rd/ Big Trees Rd intersection. The existing AC pathway will be removed and sidewalk will be installed to provide access to the Northeast corner of the intersection from Angel Creek. Existing AC path, East of Wooden Bridge, will be grind down to provide access to ADA Pedestrians.

At Location 2, in City of Mariposa on SR 49, the project a proposal is to construct a sidewalk with curb gutter, and a retaining wall to address the existing slope. New ADA curb ramps and sidewalks with curb gutter will be constructed at SR 49/SR140 intersection. Relocation of electrical elements at the Southwest corner of SR49/SR140 intersection is anticipated. As a part of the sidewalk construction the existing ditches will be filled, and RCP along with junction box will be installed to carry the flow volume. A temporary construction easement is required to construct drainage system at South of SR 49. At SR49/SR140 intersection, relocation of existing sewer manhole and Caltrans ITS items is anticipated.

At Location 3, on SR140 at PM 21.8 in City of Mariposa, the project proposal is to replace existing sidewalk, construct approx. 80 ft long new sidewalk and two new ADA curb ramps. A Temporary construction easement is required to replace the existing sidewalk, approximately 50 feet long, at Coakley Circle.

Attachment H

Alternatives:

There are two alternatives proposed, a build and no-build.

Funding
The project is funded under the Pedestrian Infrastructure Program (201.378)

Anticipated Environmental Approval

CEQA	NEPA
☒ Categorical Exemption/Statutory Exemption	☒ Categorical Exclusion/Programmatic CE
☐ Negative Declaration/Mitigated ND	☐ Finding of No Significant Impact
☐ Environmental Impact Report	☐ Environmental Impact Statement

PSR Summary Statement

The anticipated State environmental document will be Categorical Exempt under the California Environmental Quality Act and is Categorically Excluded under the National Environmental Policy Act. The anticipated environmental studies are identified in the table below. Studies will begin once a formal request to begin environmental studies has been submitted to the Northern San Joaquin Environmental Management Branch. Environmental studies are expected to take 5 months to complete. Permits will be required for this project and should be acquired during the Plans Specifications and Estimates phase of the project. Acquiring permits is expected to take 5-6 months.

Environmental studies and technical reports:

Air Quality	Air Quality Memo
Biology	Natural Environmental Study – (Minimal Impacts)
Cultural	Archaeological Survey Report & Screening Memo
Hazardous Waste	Initial Site Assessment
Noise	Noise Memo
Paleontology	Paleontological Identification Report
Water Quality	Water Quality Memo
Landscape Architecture	Scenic resource evaluation

Permits Required:

California Department of Fish and Game	1602 Lake or Streambed Alteration Agreement
United States Army Corps of Engineers	404 Dredge and Fill Permit
Regional Water Quality Control Board	401 Water Quality Certification

Assumptions and Risks

Note: The preliminary analysis, determinations, schedule, estimates of mitigation costs, and risks are based on the project description and assumptions provided in this report.

1. The project description will not change. If there is a change in project description then re-scoping will be required. (Low probability, Moderate impact to cost, scope, and schedule)

2. Based on preliminary scoping it is assumed that no cultural sensitivities will be identified within the Project Area. However, should cultural material be identified, further studies would be required. (Low probability, Moderate impact to schedule and cost)

3. It is assumed that the stream adjacent to the Murphy's project site will not be impacted by the project. Should the creek be impacted by the project, further studies would be required. (Low probability, Moderate impact to schedule and cost)

4. It is assumed that the project will not impact the riparian vegetation near the creek at the Murphy's location. Should the riparian vegetation be impacted, further studies and additional permits would be required. (Low probability, Moderate impact to schedule and cost)

5. No staging areas are anticipated. If staging is required re-scoping or re-evaluation of environmental studies may be necessary (Low probability, Moderate impact to schedule and cost)

Mitigation

None anticipated at this time.

Disclaimer

This report is not an environmental document. Preliminary analysis, determinations, and estimates of mitigation costs are based on the project description provided in this report. The estimates and conclusions provided are approximate and are based on cursory analysis of probable effects. This report is to provide a preliminary level of environmental analysis to supplement the Project Initiation Document. Changes in project scope, alternatives, or environmental laws will require a reevaluation of this report.

Reviewed by:

Environmental Manager Date: 6-21-11

Project Manager Date: 06-21-11

Environmental Technical Reports or Studies Required

Study – requires thorough analysis including field surveys, database searches, and reports
Document – does not require field surveys; issue is incidental and may only require memo to file and brief explanation in the environmental document.
N/A – Issue is not applicable to the proposed project.

	Study	Document	N/A
Community Impact Study	☐	☐	☒
Farmland	☐	☐	☒
Section 4(f) Evaluation	☐	☐	☒
Visual Resources	☒	☐	☐
Water Quality	☒	☐	☐
Floodplain Evaluation	☐	☐	☒
Noise Study	☐	☒	☐
Air Quality Study	☐	☒	☐
Paleontology	☒	☐	☐
Wild and Scenic River Consistency	☐	☐	☒
Cumulative Impacts	☐	☐	☒
Cultural			
ASR	☐	☐	☒
HRER	☒	☐	☐
HPSR	☐	☐	☒
Section 106	☐	☐	☒
SHPO Concurrence	☐	☐	☒
Native American Coordination	☒	☐	☐
Finding of Effect_____	☐	☐	☒
Data Recovery Plan_____	☐	☐	☒
Hazardous Waste			
ISA (Additional)	☒	☐	☐
PSI	☐	☐	☒
Other _____	☐	☐	☒
Biological			
Endangered Species (Federal)	☒	☐	☐
Endangered Species (State)	☒	☐	☐
Species of Concern (CNPS, USFS, BLM, S, F)	☐	☐	☐
Biological Assessment (USFWS, NMFS, State)	☐	☐	☒
Wetlands	☒	☐	☐
Invasive Species	☒	☐	☐
Natural Environment Study	☐	☒	☐
NEPA 404 Coordination	☒	☐	☐
Other _____	☐	☐	☒

Permits

401 Permit Coordination	☐	☒	☐
404 Permit Coordination (NW)	☐	☒	☐
1600 SAA Coordination	☐	☒	☐
City/County Coastal Permit Coordination	☐	☐	☒
State Coastal Permit Coordination	☐	☐	☒
NPDES Coordination	☐	☐	☒
US Coast Guard (Section 10)	☐	☐	☒
State 2081 Permit	☐	☐	☒

Central Region Environmental Division Mitigation Cost Compliance Estimate Form (MCCE)

his MCCE is for:

Dist - Co - Rte - PM:	10-CAL, MPA, MPA-4, 49, 140-29.6, 18.5 / 18.7, 21.8	EA:	10-0V300_
Project Name:	Calaveras & Mariposa ADA Curb Ramps	Alternative #: (If applicable)	
Project Description:	PEDESTRIAN ACCESSIBILITY IMPROVEMENTS		
Environmental Senior:	Mary Oliva	Phone Number:	209-941-1919
Design Manager:	Caroline Reyes	Phone Number:	(209) 948-7761
Design Engineer:	Gurwinder Sekhon	Phone Number:	
Project Manager:	Arvinder Bajwa	Phone Number:	(209) 948-7988
Date:	5/23/2011		
MCCE Prepared By:	Jonathan Schlee	Phone Number:	(209) 942-6011

	Right of Way Capital (Prior to Construction 050-$'s)		Construction Capital (During & Post Construction 042-$'s)
Archaeological			$0
Architectural History			$0
Paleontology			$0
Hazardous Waste			$0
Air Emissions			$0
Biological			
Mitigation parcels (acre/dollars)	0.00 /	$0	
Mitigation/Bank Credits (acre/dollars)	0.00 /	$0	
Monitoring			$0
Permit Fees			
401 Permit Fee		$2,000	
404 Permit Fee		$0	
1600 Permit Fee		$2,521.5	
Coastal Development Permit Fee		$0	
DFG Fee		$0	
Other		$0	$0
Other		$0	$0
Other		$0	$0
Other		$0	$0
Other		$0	$0
TOTAL		$4,521.5	$0

Approved By: Mary Oliva Date: 5-23-11

Environmental Branch Chief

This form is completed as part of the PEAR for all candidate projects, at completion of the Draft Environmental Document, at completion of the Final Environmental Document, and during preparation of the PS&E
This form is to be completed for all SHOPP, STIP, and Minor A & B projects (even those without mitigation).
Include all costs necessary to complete the commitment including: capital outlay (non-staffing support costs); cost of right-of-way or easements; long-term monitoring and reporting by consultants during the construction phase; and any follow-up maintenance post construction.
Timing of Enhancement/Endowment funds will depend on which agency is requiring the mitigation. Funds may need to be available as 050 or as 042

Attachment H

State of California
DEPARTMENT OF' TRANSPORTATION

Business, Transportation and Housing Agency

Memorandum

Flex your power!
Be energy efficient!

To: MRS. CAROLINE REYES

Date: April 11, 2010

Attn:

File: 10-Mpa-49
PM 18.5/18.7, 21.8
Pedestrian Accessibility
Improvements
EA: 10-0V300K

From: **DEPARTMENT OF TRANSPORTATION**
DIVISION OF ENGINEERING SERVICES
GEOTECHNICAL SERVICES – MS 5

Subject: District Preliminary Geotechnical Report

Introduction

As requested, The Office of Geotechnical Design North is providing Preliminary Geotechnical and Foundation Recommendations for the proposed pedestrian accessibility improvements located on Highway 49/140, from postmiles 18.5 to 18.7 and 21.8, in the Town of Mariposa in Mariposa County (Figure 1). The purpose of the project is to provide safe accessibility for pedestrians and upgrade pedestrian facilities to Americans with Disabilities Act (ADA) standards. Specifically, we were requested to provide mitigation options for the rockfall located on Highway 49 at postmile 18.7. At this location, rocks that fall into the shoulder area force pedestrians to enter travelled way to traverse that section of the shoulder.

Existing Conditions

At postmile 18.7, Highway 49 trends approximately northwest (Figure 2). The roadway was constructed on a cut/fill with a 25-foot cutslope graded at about 0.5:1 (H:V) on the east side of the roadway and an approximate 20-foot tall embankment slope, graded at 2:1 (H:V) and shallower to the southwest of the highway. The roadway consists of two, twelve-foot lanes, and one to four-foot paved shoulders. A metal beam guardrail (MBGR) is situated to the west of the southbound lane. A white wooden fence is situated at the top (east) of the cutslope with private residences further to the east. The town of Mariposa lies to the south and southeast of the slope in question. A photograph of the cutslope is shown in Figure 6.

Attachment I

Topography and Drainage

Based on the USGS topographic map of the Mariposa quadrangle (Figure 3) and our field investigation, the site lies in an area of moderate topographic relief with elevations ranging from approximately 2000-feet to greater than 2500-feet above mean sea level in the immediate vicinity of the project. Highway 49 in this area traverses an approximate northwest-southeast direction and was observed at an elevation of about 2000-feet above mean sea level near the project location. Mariposa Creek was observed to the south of the highway flowing in a southeasterly direction, Stockton Creek was observed to the east of the project location, flowing in a southerly direction. Surface drainage is handled by a system of side swales, drop inlets, culverts and overside drains.

Site Geology

According to the Geologic Map of California, Mariposa sheet (CGS, 1967), the bedrock consists of Pre-Cretaceous metavolcanic rocks east of the Melones fault (pKmv). A portion of the geologic map is included as Figure 4. This bedrock is observed in the cutslope adjacent to the highway at PM 18.7. The rock is brown to orange-brown, fresh to moderately weathered, moderately to highly fractured, and thinly to moderately bedded/foliated. The fracture pattern of the rock generally results in small rocks (~6-inches) to enter the shoulder and roadway.

Artificial fill associated with roadway and retaining wall construction is situated between the retaining wall and the adjacent highway. The fill consists of gravelly sandy SILT with COBBLES and BOULDERS that was orange and light-brown.

The map indicates the Melones Fault is situated approximately 500–feet to the southeast of the project location. This fault is not considered active by current Caltrans criteria.

Recommendations

The following recommendations are based on geological and geotechnical observations of the project location. The District has provided layouts and cross sections. Figure 7 is a cross section of the location adapted from a District cross section and shows relative slope angles for potential grading.

Option 1 – 0.5:1 Slope

Option 1 consists of cutting the slope back approximately 4-feet at the current angle of 0.5:1 (H:V). Since the existing slope is experiencing a small to moderate amount of rockfall, the same can be expected of the new cutslope. It is anticipated that due to the increased shoulder width and backslope of the shoulder that rock rollout from the toe of the slope would be less than currently exhibited.

Option 2 – 0.25:1 Slope

It has also been proposed to increase the shoulder to a standard 8-foot width. This would require grading the slope at about 0.25:1 (H:V). If this option is chosen, our office will have to perform stability analysis of the slope.

Option 3 – Wire Mesh Drapery

In addition to cutting the slope back or as a sole option, the use of Double Twisted Wire Mesh drapery system would be a feasibile option to keep loose rock close to the toe of the slope. The system involves a drapery composed of steel wire, wrapped in a chain-link style pattern. The system is anchored to the top and sides of the cutslope with cable anchors grouted into competent rock.

Option 4 – Retaining Wall

Several retaining wall options are available to an eight-foot shoulder and no rockfall. Standard plan walls can be designed by the District, although construction of the footings would require a significant cut into the existing highway, into the existing cutslope, or both.

A soldier pile wall is another feasible option. Depending on the wall LOL, the footing excavation would not enter the existing highway. The wall could require a substantial backcut. Because it is a special design wall, Structures Design would have to design the wall.

A soil nail wall would also be another feasible option. It would require little foundation per se, and be able to be constructed with or without a batter, at any location along the slope, yielding as much shoulder as necessary. The wall does not require a cut into the adjacent highway although, cutting into the adjacent cutslope would be anticipated in order to gain shoulder.

Further Investigations

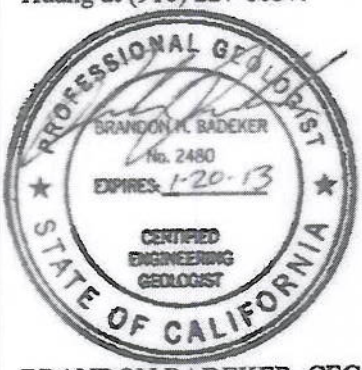
If either Options 2 or 3 are chosen, the Office of Geotechnical Design North (OGDN) will need to perform stability analysis on the cutslope, as well as provide recommendations for the drapery system, if applicable. If a retaining wall option is chosen (Option 4), OGDN will need to be requested to perform preliminary and final foundation reports, which would include drilling two to three borings along the wall layout as well as geophysical testing and laboratory testing. The subsurface investigation would be performed in order to determine pile tip elevations, soil nail lengths, and/or other wall design parameters.

Pertinent Reports and Investigations

The District has provided site photographs and project plans. The following presents a list of references used in preparation of this report.

- Krauskopf, K.B., 1985, Geologic map of the Mariposa quadrangle, Mariposa and Madera Counties, California: U.S. Geological Survey, Geologic Quadrangle Map GQ-1586, scale 1:62500.
- Topographic Map of the Mariposa quadrangle, USGS, 1981

If you have any questions or comments, please call Brandon Badeker at (916) 227-1046 or John Huang at (916) 227-1037.

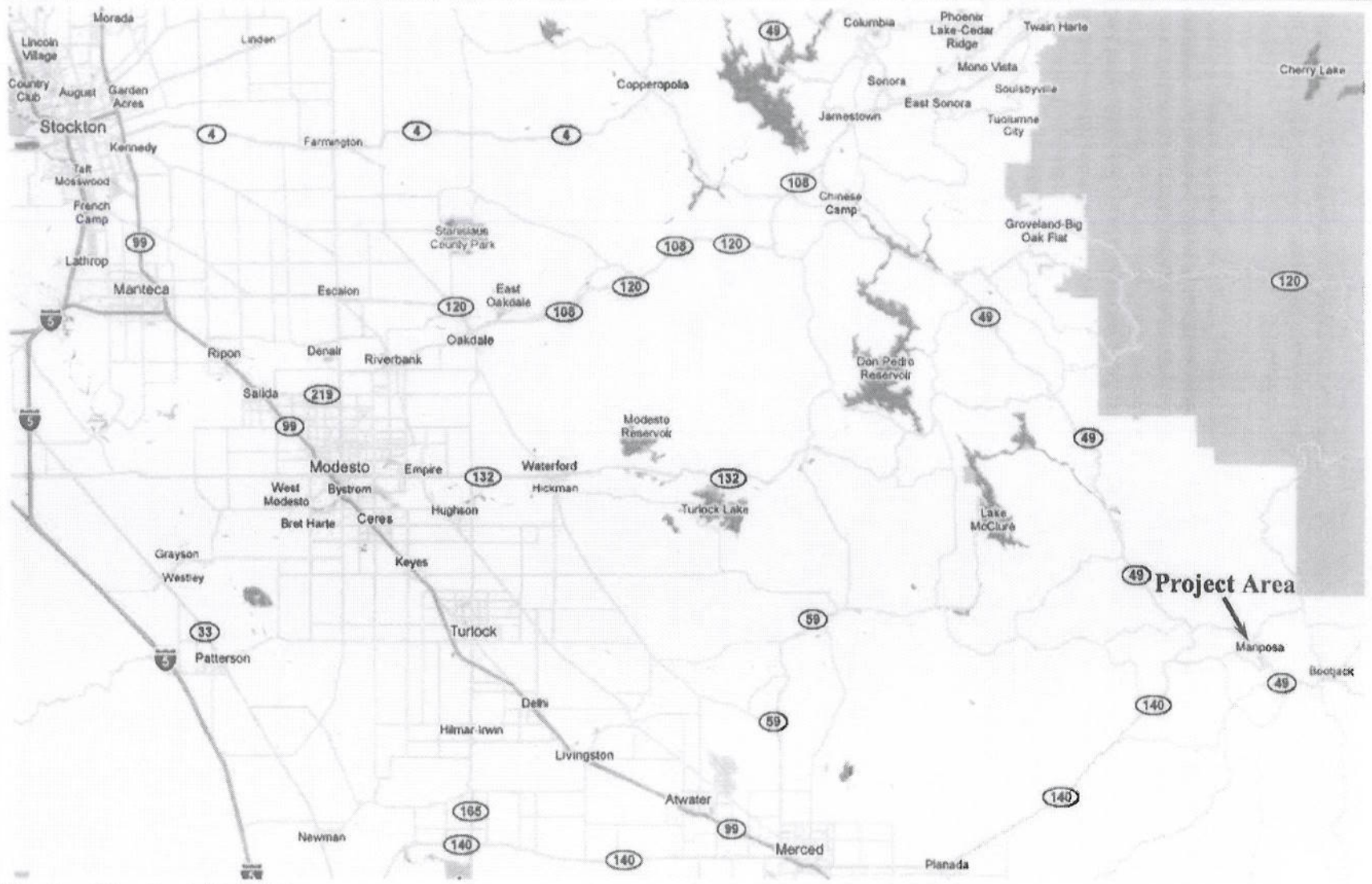


BRANDON BADEKER, CEG
Engineering Geologist
Geotechnical Design - North

Attachments:

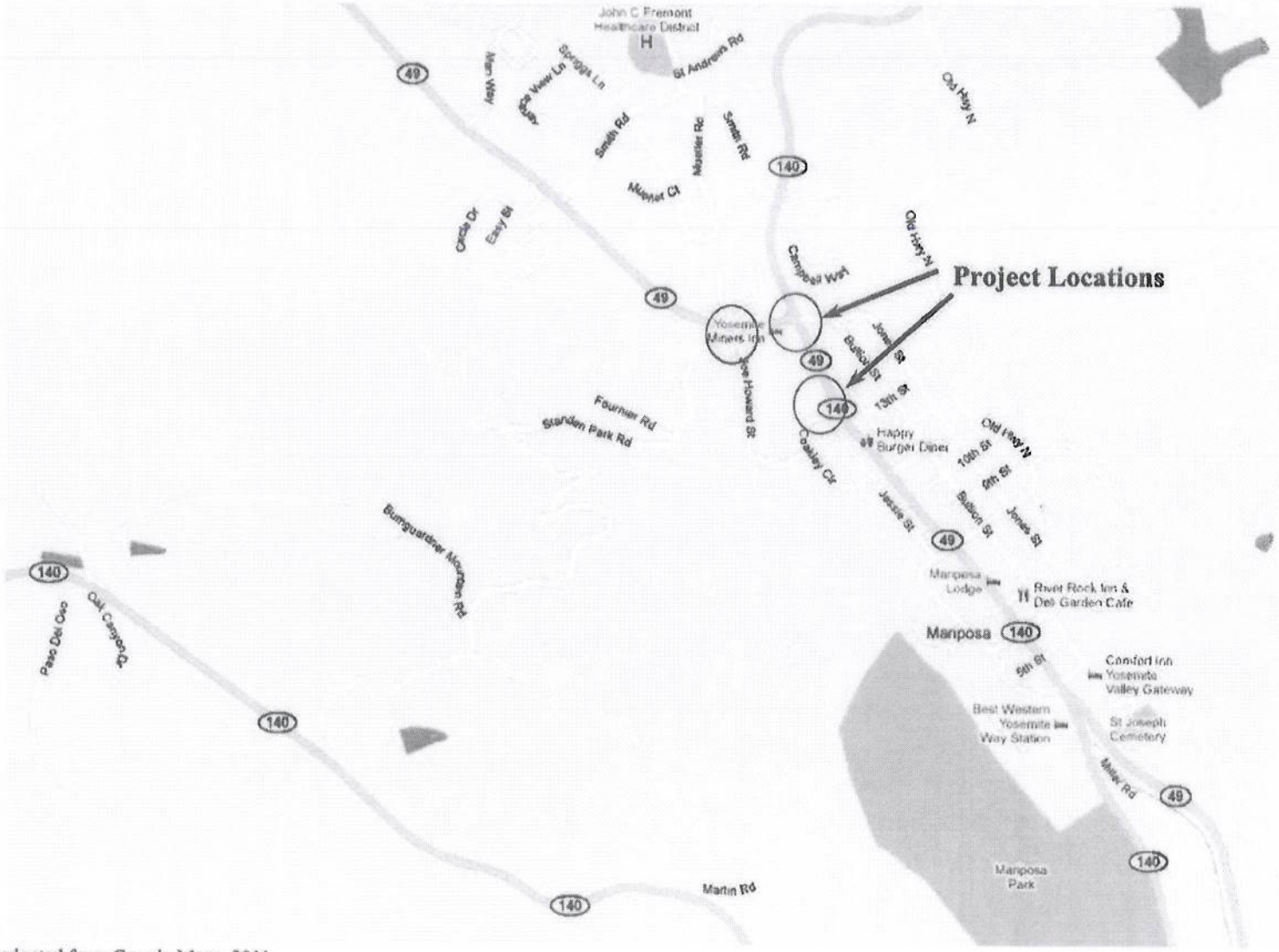
- Figure 1: Vicinity Map
- Figure 2: Location Map
- Figure 3: Topographic Map
- Figure 4: Geologic Map
- Figure 5: Layout
- Figure 6: Photograph
- Figure 7: Cross Section

C: RBibbens (E-copy)
JHuang (E-copy)
MWillian (E-copy) – GS Corporate
GS File Room (email gs_file_room@dot.ca.gov)
Arvinder Bajwa (email: Arvinder_Bajwa@dot.ca.gov) - District 10 Project Manager
Caroline Reyes (email: Caroline_Reyes@dot.ca.gov) – District 10 Design Manager
Mary Oliva (email: Mary_Oliva@dot.ca.gov) – District 10 Environmental Planning
Dave Dhillon (email: Dave_Dhillon@dot.ca.gov) - District Materials Engineer



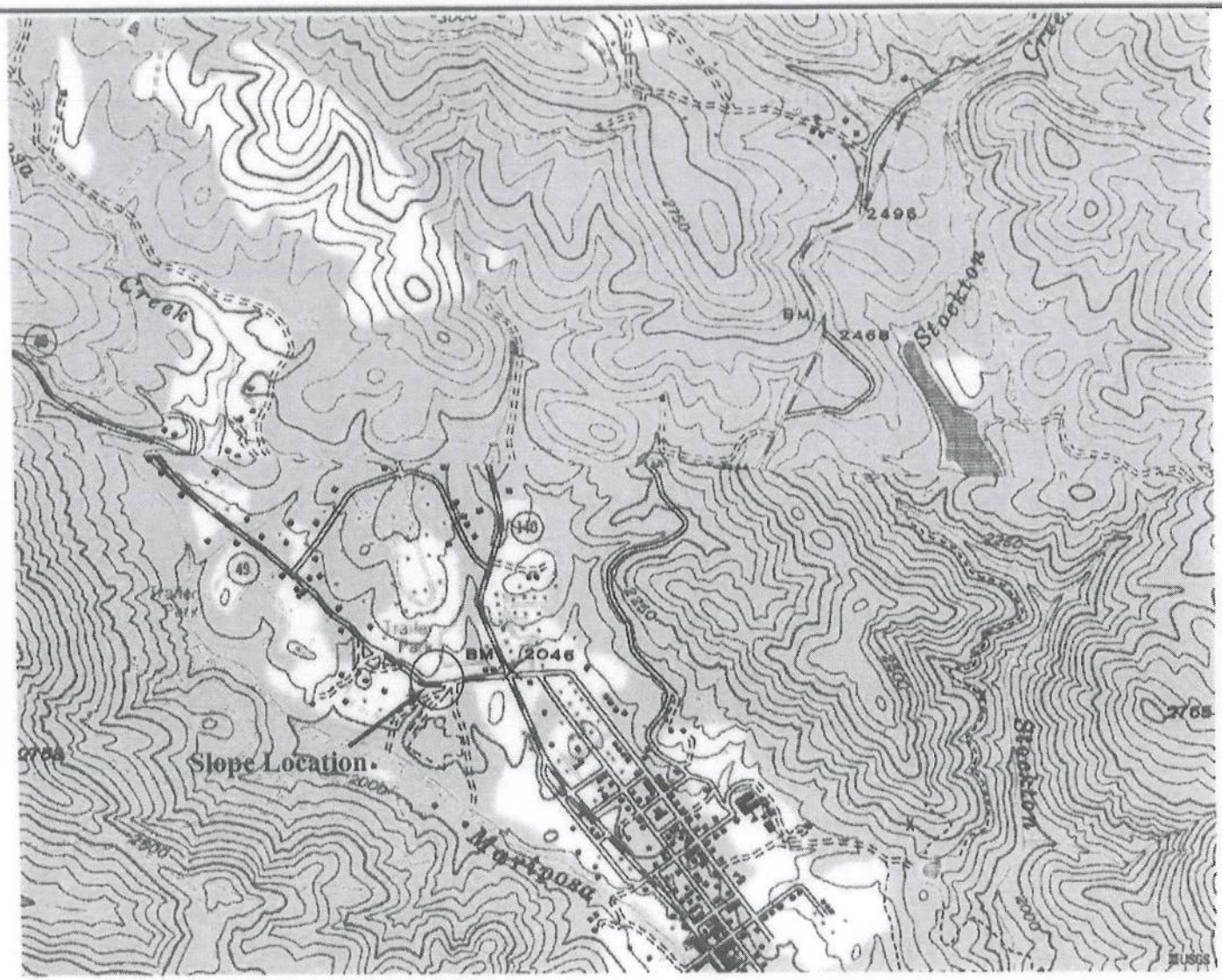
Map adapted from Google Maps, 2011

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 10-0V300K Date: APRIL 2011	**VICINITY MAP**	Figure 1
		10-Mpa-49 PM 18.7	



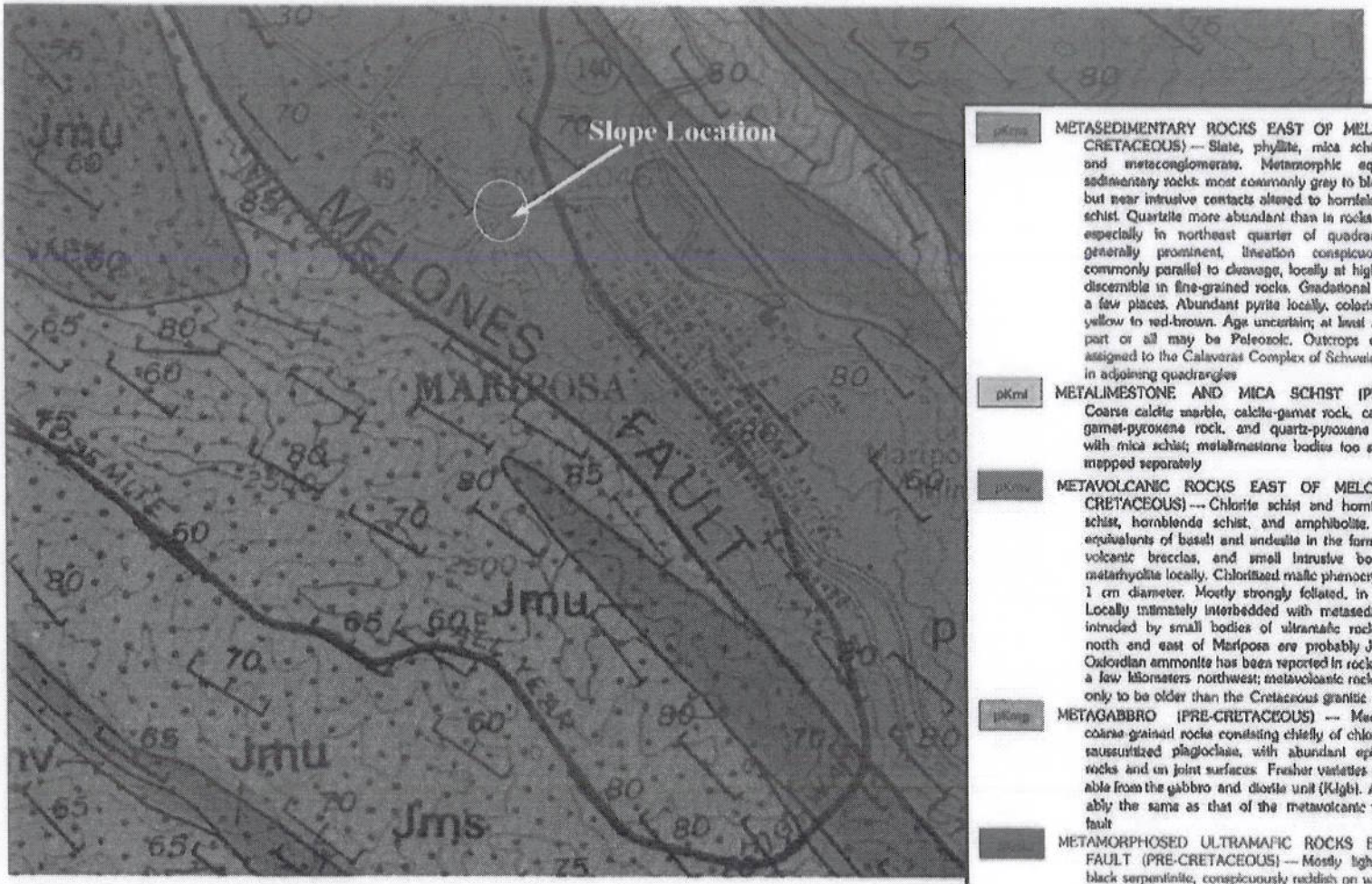
Map adapted from Google Maps, 2011

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 10-0V300K Date: APRIL 2011	**LOCATION MAP**	Figure 2
		10-Mpa-49 PM 18.7	



Map adapted from the Topographic Map of the Mariposa quadrangle, USGS, 1981

CALTRANS Division of Engineering Services Geotechnical Services Office of Geotechnical Design - North	EA: 10-0V300K Date: APRIL 2011	**TOPOGRAPHIC MAP** PM 18.7	Figure 3
		10-Mpa-49 PM 18.7	



pKms METASEDIMENTARY ROCKS EAST OF MELONES FAULT (PRE-CRETACEOUS) — Slate, phyllite, mica schist, hornfels, quartzite, and metaconglomerate. Metamorphic equivalents of clastic sedimentary rocks: most commonly gray to black slates and phyllites, but near intrusive contacts altered to hornfels and (or) coarse mica schist. Quartzite more abundant than in rocks west of Melones fault, especially in northeast quarter of quadrangle. Planar cleavage generally prominent, lineation conspicuous locally. Bedding commonly parallel to cleavage, locally at high angles; generally not discernible in fine-grained rocks. Gradational bedding prominent in a few places. Abundant pyrite locally, coloring weathered outcrops yellow to red-brown. Age uncertain; at least as old as Jurassic, and part or all may be Paleozoic. Outcrops continuous with rocks assigned to the Calaveras Complex of Schweickert and others (1977) in adjoining quadrangles

pKml METALIMESTONE AND MICA SCHIST (PRE-CRETACEOUS) — Coarse calcite marble, calcite-garnet rock, calcite-wollastonite rock, garnet-pyroxene rock, and quartz-pyroxene hornfels, interlayered with mica schist; metalimestone bodies too small and erratic to be mapped separately

pKmv METAVOLCANIC ROCKS EAST OF MELONES FAULT (PRE-CRETACEOUS) — Chlorite schist and hornfels, chlorite-muscovite schist, hornblende schist, and amphibolite. Chiefly metamorphic equivalents of basalt and andesite in the form lava flows, tuff beds, volcanic breccias, and small intrusive bodies; metadacite and metarhyolite locally. Chloritized mafic phenocrysts locally, as much as 1 cm diameter. Mostly strongly foliated, in some places massive. Locally intimately interbedded with metasedimentary rocks; locally intruded by small bodies of ultramafic rocks. Metavolcanic rocks north and east of Mariposa are probably Jurassic because a late Oxfordian ammonite has been reported in rocks continuous with them a few kilometers northwest; metavolcanic rocks elsewhere are known only to be older than the Cretaceous granitic rocks that intrude them

pKmg METAGABBRO (PRE-CRETACEOUS) — Medium- to dark-green, coarse-grained rocks consisting chiefly of chloritized hornblende and saussuritized plagioclase, with abundant epidote both within the rocks and on joint surfaces. Fresher varieties not easily distinguishable from the gabbro and diorite unit (Kgb). Age uncertain, presumably the same as that of the metavolcanic rocks east of Melones fault

METAMORPHOSED ULTRAMAFIC ROCKS EAST OF MELONES FAULT (PRE-CRETACEOUS) — Mostly light- to dark-green and black serpentinite, conspicuously reddish on weathered surfaces, with many slickensides and patches of soft whitish talc schist; partly schistose and partly massive with conspicuous mesh structure and bastite metacrysts. Locally metamorphosed to coarse aggregates of talc and olivine plus anthophyllite and (or) actinolite. Commonly associated with aplite and vein quartz; locally silicified to a magenta-colored rock resembling quartzite

Map adapted from Krauskopf, K.B., 1985, Geologic map of the Mariposa quadrangle, Mariposa and Madera Counties, California: U.S. Geological Survey, Geologic Quadrangle Map GQ-1586, scale 1:62500.

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GEOLOGIC MAP
PM 18.7

Figure 4

10-Mpa-49 PM 18.7

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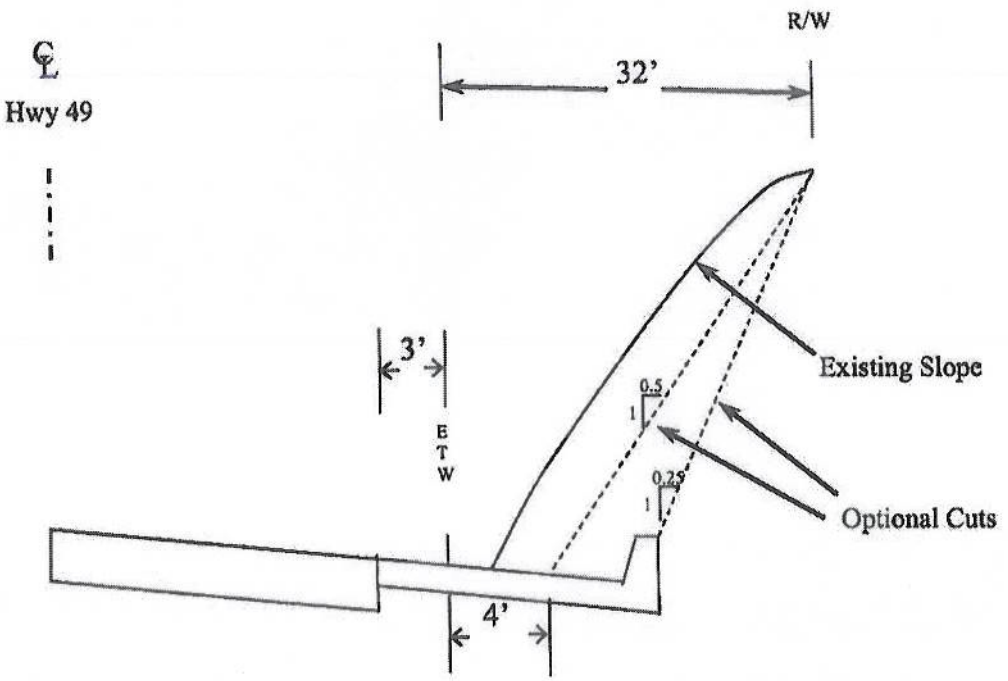
		10-Mpa-49 PM 18.5/21.8	



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		10-Mpa-49 PM 18.7	